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FOREST DEPARTMENT.

ANNUAL PROGRESS REPORT OF ADMINISTRATION,

FOR THE YEAR ENDING 31st MARCH 1891.

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No. 58 of 1891-92.

From

S. EARDLEY-WILMOT, Esq.,

Offg. Conservator of Forests, Central Circle,

North-Western Provinces and Oudh,

To

The SECRETARY to GOVERNMENT,

North-Western Provinces and Oudh,

Revenue (Forests) Department.

Dated Naini Tal, the 27th July 1891.

Sir,

I have the honour to submit the Annual Progress Report on Forest Administration in the Central Circle for 1890-91.

I have the honour to be,

Sir,

Your most obedient servant,

S. EARDLEY-WILMOT,

Offg. Conservator.

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CENTRAL CIRCLE REPORT.

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CENTRAL CIRCLE.

N.-W. PROVINCES AND OUDH.

ANNUAL PROGRESS REPORT

OF

FOREST ADMINISTRATION.

For the year ending 31st March 1891.

By S Eardley-Wilmot, Esquire, Officiating Conservator of Forests.

INTRODUCTION.

A further increase to the area of state forests; the amalgamation of the Bundelkhand Divisions under the more direct management of the department; some progress in the demarcation and in the definition of rights in areas already under departmental control; a commencement in the preparation of working plans for the forests not yet under systematic management; a continuation of the necessary works of improvement; an extension of fire conservancy; and finally, favorable financial results in spite of more or less adverse influences, such may be considered to be the more striking features of the year under review.

2. The Officiating Conservator's tour comprised visits to Jhánsi and Lalitpur, to the plantations of the Agra and Eastern Jumna Canals, to the submontane and hill divisions of the circle and to Dehra Dún, where he acted as Member of the Board of Control of the Forest School. Notes on the forests of Jhánsi and Lalitpur, and also on the Bamboo forests of these districts, were drawn up for guidance of the Divisional Officer; and suggestions as to the future treatment of the Canal Plantations visited were forwarded to Government in the Irrigation Department. All Divisional Offices save that of Bánda were inspected during the year.

CHAPTER I.

AREA AND BOUNDARIES.

1.—Area.

3. The change in area is, as usual, attributable to more accurate calculation and to acquisition of new areas. The statement given below will give full details :—

Division.	Area on 1st April 1890.	Added during 1890-91.	Excluded during 1890-91.	Area on 31st March 1891.	Remarks
Naini Tal ...	69 square miles.	3 acres.	18 square miles	51 square miles	
Kumaun ...	478 " "	*Nil.*	11 " "	467 " "	
Garhwál ...	511 " "	11 square miles	31 " "	491 " "	
Ganges ...	350 " "	55 " "	4 " "	401 " "	
Jhánsi ...	37 " "	11 " "	*Nil.*	48 " "	
Lalitpur ...	140 " "	*Nil.*	45 acres.	40 " "	
Total, Reserves ...	1,585 square miles.	77 square miles, 3 acres.	64 square miles 45 acres.	1,598 square miles	
Naini Tal ..	64 square miles.	26 square miles	3 acres.	90 square miles.	
Lalitpur ...	4 " "	*Nil.*	*Nil.*	4 " "	
Total, Protected ...	68 square miles.	26 square miles.	3 acres.	94 square miles.	
Bánda ...	118 square miles.	*Nil.*	*Nil.*	118 square miles.	
Total, Unclassed ...	118 square miles.	*Nil.*	*Nil.*	118 square miles.	
Grand Total ...	1,771 square miles.	103 square miles	64 square miles	1,810 square miles.	

4. **Naini Tal Division.**—The changes in reserves is due to revision of area in the Gagar-Ninglat and is nominal. In protected forests the increase is due to the reversion of Airadeo from the charge of the revenue authorities. This tract, after revision of boundaries and rights, was re-gazetted under Notification No. $\frac{156F.}{667-71}$, dated 25th February 1891.

Kumaun Division.—An inter-divisional change of boundary reduces the area by 11 square miles.

Garhwal and Ganges Divisions.—The former loses 20 square miles and the latter gains 31 square miles by change of boundary. Twenty-four square miles are added to the Ganges by the reservation of the Lansdowne forests in Notification No. $\frac{803F}{41A-43}$, dated 14th November 1890, and 4 square miles are disafforested in the same division under Notification No. $\frac{162F.}{214A.-9}$, dated 25th February 1891, being exchanged for an almost equal area of district forest now under settlement.

Jhansi Division.—This division is increased by 11 square miles of reserves gazetted under Notification No. $\frac{708F.}{983-92}$, dated 30th September 1890.

Lalitpur Division.—The calculation of areas is not yet completed, and therefore no change is made.

Banda Division.—The reservation of unclassed forests is still progressing, and it is expected that the final notification will issue in July.

5. The final notification under section 19, Act VII, for the Dolmar-Morah forests will shortly issue. This, with the reservation of the Bánda forests, a question of disafforesting certain areas in Jhánsi and the settlement of the small area noted under the Ganges Division, are the only pending cases affecting the area of the circle, so that attention may now well be directed to the expediency of extending the scientific management available in the province to those valuable areas in Kumaun and Garhwál which the district authorities may intend to more specially protect for the future benefit of the country.

2.—Boundaries.

6. Demarcation works were exceptionally heavy during the year, Rs. 4,414 having been expended against Rs. 2,250 in the previous year. The acquisition of new areas accounts for this; boundary marks are in good order, and the expenditure in up-keep normal.

7. **Naini Tal Division.**—The repair of boundary pillars was effected at a cost of Rs. 41. The erection of intermediate boundary marks in the protected forests of Ránikhet was completed, and similar work in Airadeo was in hand at the close of the year, the outlay amounting to Rs. 126; 408 pillars were built at a cost of Rs. 477 to demarcate the new Dolmar-Morah Reserve. The new Ránikhet cantonment boundary has been demarcated by the cantonment authorities. The expenditure in the division thus amounted to Rs. 644, and much good work was done.

Kumaun Division.—Rupees 350 were spent in up-keep of boundary marks and in clearing boundary lines. The boundaries are in good order, and a dispute affecting the demarcation of cultivation at the south of the Kotah Dún was satisfactorily settled after the close of the year.

Garhwal Division.—There was an expenditure of Rs. 231 on repair of existing boundary marks. The Divisional Officer reports the demarcation to be in satisfactory condition.

Ganges Division.—The chief work of the year was the completion of the demarcation of the Lansdowne Reserve, where 1,522 pillars were erected at a cost of Rs. 2,220. Repairs and improvements to existing demarcation cost Rs. 122. The boundaries are in good order. The claims of the Ráni of Landhaura to certain islands in the Ganges

are still unsettled. The case came on for trial, at Moradabad, in May, but was again postponed.

Jhansi Division.—Two hundred and seven stone pillars were erected at a cost of Rs. 349. Demarcation work was completed in the Jhánsi pargana, and is expected to be finished in other parganas before the rains set in.

Lalitpur Division.—There was no boundary work necessary in this division.

Banda Division.—The boundaries are in good order, but so soon as the notification constituting reserves issues, the serial numbering of the pillars must be taken in hand. A sum of Rs. 201 was spent on demarcation during the year.

CHAPTER II.

SURVEYS, WORKING PLANS AND ANNUAL PLANS OF OPERATIONS.

I.—Surveys and Settlement.

8. The circle expenditure on surveys during the financial year amounted to Rs. 1,453, a sum chiefly owing for work carried out in Jhánsi, Bánda and Naini Tal. It will probably be found expedient in the future to permit some of the savings effected on works of improvement, such as roads and buildings now approaching completion, to be utilized in keeping the existing 4″ maps up to date by the entry of new detail, as these maps are fast losing their value owing to the many changes which have taken place since their compilation. The cost of surveys undertaken for this Circle by the Survey of India and the Forest Survey Branch are reported by these departments to be Rs. 1,552 and Rs. 817 respectively during the year ending the 30th September 1890. The cost of forest settlement operations, during the year was Rs. 298 in the Naini Tal Division, and Rs. 352 in the Bánda Division.

9. **Naini Tal Division.**—The survey of part of the boundary of the Ránikhet protected forests and of Airadeo between original pillars was carried out under the superintendence of the Divisional Officer at a cost of Rs. 279, whilst Rs. 416 were paid towards the survey of the Dolmar-Morah Reserve by the Forest Survey Branch, and Rs. 298 represents the charges of Forest Settlement Officer in the settlement of this forest. The work in this division on settlements and surveys is satisfactory.

Kumaun Division.—Rupèes 477 was expended in survey work under departmental supervision. The difficulty of obtaining skilled surveyors and the insufficiency of the check on their work form serious obstructions to the system of departmental surveys, and must do so until trained subordinates are available and can be relied on to superintend the local surveys going on in their charges.

Garhwal Division.—The expenditure in this division was *nil*, surveyors not having been procured in time.

Ganges Division.—The survey of the Lansdowne Reserve by the Survey of India Department was in progress during the year, and something was done towards entering details on the 4″ maps by the Divisional Officer. The amount expended on this latter work was Rs. 36.

Jhansi, Lalitpur and Banda Divisions.—No surveys were carried out during the year, but the settlement of reserves was proceeded with.

10. Traces of the Jhánsi forest maps were kindly supplied by Colonel Sandeman, and the areas of the forest blocks computed for this office. Tracings of boundary maps of forest tracts in Lalitpur and area statements will now be supplied.

11. The supply of sets of 4″ maps to Range Officers is now complete, and the system is found to be of great assistance in every way except to the more illiterate members of the staff.

2.—Working Plans.

12. There is little progress to be reported in the preparation of new working plans, although much work and research was involved in bringing the registers up to date; and the working plan précis and explanatory notes issued from the office of the Superintendent, Working Plans, were of the greatest assistance both in preparing these registers and in facilitating future compliance with the terms of the plans.

13. The Kohtri-Palain plan was sanctioned by the Local Government during the year, and a special officer was deputed to collect data for the preparation of working plans as noted in para. 18 of the last Annual Report. After completing the field work for the sál areas in Kumaun ill-health unfortunately prevented the rest of the proposals from being carried out, and this is the more to be regretted as it is of the utmost importance that some definite information as to the value and capabilities of the forests of the Lansdowne Reserve should be acquired at an early date, so that the supply of produce to the cantonments, the purpose for which this reserve was primarily formed, may be systematized if the undertaking is possible, or, if it is not, that other arrangements may be made. Enumeration surveys will therefore be continued in these forests during the recess months.

14. The working plan for the sál areas in Kumaun will be drawn up during the present recess. Careful inspection of the khair areas in Kumaun leads to the supposition that this division contains an area of some 35,000 acres under khair forest of all ages, but, as noted in para. 40 of this report, the most suitable method of reproduction is not yet decided upon. The Divisional Officer reports collection of sufficient data to draw up a preliminary plan for these forests, and this work will now be carried out Considering the competition amongst manufacturers owing to the closure of kattha works in Nepal, it is thought that more stringent regulations preventing some of the more prominent abuses in the manufacture of kattha may easily be introduced.

15. It is pleasant to be able to report continued success as following the carrying out of the bamboo working plans in this circle, and it is intended that next working season the introduction of a uniform two year rotation shall take effect in all the submontane forests The bamboo question has been carefully worked out with due consideration of local details; and the conclusions arrived at are justified by experience and knowledge.

16. The Divisional Officer of Bundelkhand has orders to collect data and submit short working plans for the more valuable bamboo and fuel forests in his charge. The question of regular treatment of these forests is now the more urgent when it is hoped that export from these districts will largely increase.

3.—Annual Programme of Works.

17. As usual the list of unexecuted works is annexed in Appendix A, but this statement is misleading, as the programmes are compiled for the working season, which extends from November to June, whilst the progress report is submitted for the financial year, and the detail of work done must correspond with the financial entries. In point of fact many works unexecuted on 31st March are completed by the 15th June.

CHAPTER III.

PROTECTION AND IMPROVEMENT.

1.—Establishment.

18. Except for the first 10 days of April 1890, the charge of the circle was held by the writer of this report.

The following statement shows how divisional charges were arranged :—

Naini Tal	...	Mr. F. Beadon-Bryant, Deputy Conservator.
Kumaun	..	„ A. G. Hobart-Hampden, Officiating Deputy Conservator, from 1st April to 25th June 1890.
		„ F. Beadon-Bryant, Deputy Conservator, from 26th June to 26th October 1890.
		„ A. G. Hobart-Hampden, Officiatang Deputy Conservator, from 27th October to the close of the year.

Garhwál ...	Mr. S. Eardley-Wilmot, Deputy Conservator, from 1st to 10th April 1890. " J. M. Blanchfield, Sub-Assistant Conservator, from 11th April to 3rd December 1890. " B. B. Osmaston, Officiating Deputy Conservator, from 4th December 1890 to 18th January 1891. Col. J. E. Campbell, Deputy Conservator, from 19th January till close of year.
Gagges ...	Mr. N. Hearle, Deputy Conservator, from 1st April to 16th May 1890. " B. B. Osmaston, Officiating Deputy Conservator, from 17th May to 23rd November 1890. " A. Smythies, Deputy Conservator, from 24th November to close of year.
Jhánsi ...	" H. M. Bird, C.S., Deputy Commissioner, from April to September. " R. G. Hardy, C.S., Deputy Commissioner, from October to the close of the year.
Lalitpur ...	" J. V. Sturt, Deputy Commissioner, from April to August. " E. T. Lloyd, C.S., Deputy Commissioner, from September to March.
Bánda ...	" W. Hoey, C.S., Collector, throughout the year assisted by—— " Jwala Parshad, C.S. Assistant Collector, in charge Karwi Sub-Division, throughout the year.

Thus the three most important divisions have each suffered from at least two changes of officers during the season, and it is but just to suggest that, unless these divisions had been in good working order, these changes taking place at the busiest time of the year would have affected the interests of Government and the welfare of the forests more than has been the case.

19. The following statement shows the sanctioned grants and actual expenditure on establishments during the last two years :—

Year.	Executive and protective establishment.			Office establishment.		
	Permanent.	Temporary.	Actual expenditure.	Permanent.	Temporary.	Actual expenditure.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1889-90 ...	35,040	24,650	55,424	11,184	618	11,802
1890-91 ...	35,040	26,838	54,373	11,184	1,260	12,225

There was an increase of 13 men in the executive and two in the office establishment, bringing the totals up to 600 and 36 as against 587 and 34 of last year, due to the acquisition of new forests. The reorganization of the executive staff of the circle is now under consideration, proposals having been submitted to the Local Government improving the prospects and increasing the number of rangers, so that it will be needless here to dwell on the present unsatisfactory state of the establishment.

20. During the year two forester and three ranger probationers were entertained at the Imperial Forest School at Dehra, but one of the latter resigned his appointment before completing the course. Of the previous year's students one ranger qualified and obtained a situation in the circle, but he resigned after a few months' service, whilst a second failed to obtain a certificate at the final examination and was struck off the list of probationers of this circle as unsuitable. Another vacancy was caused by the resignation of an untrained ranger in the Kumaun Division, so that taking into account the promotion of four untrained foresters to rangerships, the increase in the staff of rangers is *nil*, Mr. Haslett having been recently promoted to a Sub-Assistant Conservatorship. Thus after six years of expenditure the circle possesses only two trained rangers and seven trained foresters, and though there are funds available for further appointments to the ranger class, there are no suitable candidates to fill the posts. When the time arrives, as it shortly will, that the number of private students increases and a register of passed candidates waiting for employment is kept up at the Imperial Forest School, there will be more hope of being able to fill existing vacancies with suitable men. It is considered that the Director of the School is in a much better position to judge of the suitailbity of students for forest work than a Conservator, who seldom has the opportunity of becoming acquainted with probationers, and in future probationers from this circle should only continue at the school subject to favorable opinion of the Director as to the probability of their ultimate fitness for the profession.

21. The Executive and Protective Establishment do not appear from reports of Divisional Officers to have worked quite so satisfactorily as might be desired, but this is due more to the inferior class of official and to want of intelligence and zeal than to patent lack of honesty, for there were no prosecutions of subordinates during the year, and dismissals, reductions and other punishments were not numerous.

22. The year was not marked by any extraordinary malarial phenomena; in Kumaun seven deaths occurred in a strength of 147; in other divisions the death rate was lower than usual.

2.—General Protection and Breaches of Forest Law.

23. Below is given an abstract comparing the results of the present with the past year:—

Division.	Year.	Pending and new cases.	Prosecutions. Convictions. Cases.	Convictions. Persons.	Acquittals. Cases.	Acquittals. Persons.	Cases pending. Cases.	Cases pending. Persons.	By what Court.	Cases compounded under section 67, Act VII, 1878. Cases.	Persons.	Rupees.
Naini Tal	1889-90	8	2	3	1	1	2	4	...	308	467	404
	1890-91	12	5	50	...	2	7	7	Asst Commr of Naini Tal... 4; Sadar Amin of Almora ... 1; Cantonment Magistrate, Ránikhet 7	347	581	747
Kumaun	1889-90	2	2	2	...	...	...	...	...	90	131	773
	1890-91	...	...	...	...	...	...	...	...	128	145	596
Garhwál	1889-90	7	3	4	1	13	3	9	...	54	96	599
	1890-91	6	2	9	4	10	...	...	1 by Magistrate of Garhwál; 3 by Magistrate, Bhabar; 3 by Magistrate, Bijnor.	41	58	289
Ganges	1889-90	...	...	...	...	...	...	...	...	66	111	405
	1890-91	...	...	...	...	...	...	...	...	61	112	569
Jhánsi	1889-90	10	10	12	...	1	...	...	No cases compounded.			
	1890-91	...	...	...	...	...	...	...				
Lalitpur	1889-90	4	1	2	3	3	...	...				
	1890-91	4	4	4	...	...	...	...				
Bánda	1889-90	4	4	8	...	...	...	...				
	1890-91	39	37	46	2	2	...	...				

The cases before the courts rose from 32 to 61, and the cases compounded, which last year involved 805 persons in an expenditure of Rs. 2,181, this year affected 896 persons and brought in Rs. 2,201. The results of action taken under section 67, Act VII, 1878, are therefore nearly similar.

24. In the Naini Tal Division the larger proportion of cases occurred in the Naini Tal Sub-Division, and this suggests increasing difficulty in the fuel supply to residents under the present unsatisfactory arrangement, with the result of an increase in illegal cutting. Almost the whole increase in cases before the courts occurred in Bánda, where those cases rose from 4 involving 8 persons to 39 involving 48 persons, and as out of this number only 2 persons in 2 cases escaped conviction it may be surmised that the executive staff showed laudable zeal in their police duties during the year.

There were no important criminal cases decided during the year; the investigation of the murder of a forest guard is now in the hands of the Tarái police, who have not yet unravelled the mystery.

3.—Protection from Fire.

Fire conservancy operations not having closed at the time of submitting this report, the information under this sub-head will be found in Appendix F.

4.—Grazing and Fencing.

25. Appendix B gives the areas closed to grazing in the circle, variations from the figures of last year being due to additions of new forest area to the circle.

26. The amount of grazing dues collected and of grass sold during the last two years is as under :—

	Grazing. Rs.	Grass. Rs.	Total. Rs.
1889-90	17,459	6,132	23,571
1890-91	29,943	5,668	35,611

To compare the figures it must be remembered that Rs. 5,000 under grazing dues in the year under report are deferred dues from 1889-90.

27. An attempt is made in the statement below to give by divisions the number of cattle which grazed in the State forests. No great accuracy can, however, without actual enumeration be vouched for; and a cattle census in the circle would be of no great use so long as approximate figures can be given:—

Division.	Buffaloes.	Cows and horses.	Sheep and goats.	Total.	Acres open to grazing.	Acres per head of cattle grazed.
Naini Tal	4,612	29,067	7,430	41,109	83,267	2·0
Kumaun	13,479	47,692	3,019	64,190	120,238	1·9
Garhwál	4,371	26,182	4,939	35,492	55,197	1·5
Ganges	8,135	25,454	12,577	46,166	101,265	2 2
Total ...	30,597	128,395	27,965	186,957	359,967	2 acres.

28. **Naini Tal Division.**—The 2,568 acres closed to grazing in the Ránikhet protected forests have been fenced with a single strand of barbed wire, and time will show if this is a sufficient check againsttrespass. Rupees 1,983 were spent on fencing.

The other divisions of the circle report no expenditure on fencing to prevent trespass in closed forests. The details of grazing dues collected by divisions are given in para. 54.

5.—Natural Reproduction.

29. The winter was severe and the spring unusually prolonged and stormy, so that in some forests the damage by frost was excessive and the seeding of the more prominent species a failure. Chír and sál seed was almost entirely wanting, but oak again seeded fairly well. The effects of the severe frost in February on young growth was most disastrous, sál saplings up to 15 feet high being cut down, and large areas of grass lands where a promising crop of young trees had given good hope of the final victory of tree growth over grass offered the appearance of having been scorched by fierce fires. The encroachment of tree growth on these open plains must be, it is evident, dependent on the absence of severe frosts during a series of years, so that the young growth can advance beyond the frost limit before the occurrence, sooner or later, of an abnormal fall in temperature. It is interesting to observe that the very lightest overhead cover is sufficient to protect from the effects of frost, and it is well to remember that in frost bitten localities injudicious fellings may readily result in rendering natural or artificial reproduction well nigh an impossibility.

30. Of the general effects of protection there is nothing to add to the remarks made last year. The value of protection will not be disputed, nor the fact that in by far the largest area of the State forests of this circle natural reproduction will readily follow protection from fire and cattle.

In the forests of Bundelkhand broadcast sowing may well be used to aid nature in restocking impoverished or scanty soils.

31 The experiment of burning over chír forests with a view to more successful fire conservancy operations does not after trial commend itself. The result as observed in the forests of the Ránikhet Division is not only beyond measure harmful to the young growth, but the system would not be effective in staying the course of a fire which might break out later on in the season after the needles of the year have fallen It would appear, therefore, that we must in these forests continue to place reliance for the fostering of young growth on the efficacy of our protective arrangements and on the good will and common sense of the neighbouring inhabitants.

32 Those who have known these forests for a number of years can testify to the excellent reproduction and healthy appearance of the bamboos under the protective measures established during the last few years.

6 —Artificial Reproduction

33. The usual artificial reproductive operations were continued at a comparative cost as below noted —

	Regular plantations Rs	Cultural operations Rs
1889-90	1,268	1,257
1890-91	1,341	1,378

The area of plantations decreased by 8 acres, and as noted in the divisional detail it is proposed to still further restrict operations.

34 **Naini Tal Division** —The planting out of blanks in the Ránikhet reserve was continued, 5,600 deodár, cypress and horse chestnut being put down at a cost of Rs. 94

It is considered that the cultivation of exotics in the reserve should now cease, and that more attention should be paid to afforesting the barer slopes with the native growth of chír by liberal sowings.

At Naini Tal 9,000 deodár were planted on China at a cost of Rs 136. Here the continuance of arboricultural operations is advocated, as the locality forms more or less a pleasure ground for the visitors to the station.

In the other plantations removal of inferior species was carried out with good effect.

Mr Craw superintended the nursery at Chaubattia with his usual zeal, but, as anticipated, the financial results of the year are poor, owing to the almost total failure of the fruit crop resulting from an unfavorable spring .—

	Revenue Rs.	Expenditure. Rs
1889-90	1,668	1,772
1890 91	693	1,672

310 lbs of fruit tree seed and 274 lbs. of forest tree seed were sown in the nursery The larger proportion of the former consisted of sweet chestnut, a tree which thrives well at Chaubattia and will, it is thought, amply repay cultivation in the hills Some 50 lbs of apple seed was procured from England and Kashmír. As a rule, the seed germinated extremely well, though the seedlings of forest trees suffered much from the excessive moisture of the monsoon The seed of the Robinia pseudo acacia obtained from Simla germinated well and the young transplants are vigorous.

4,138 fruit and 11,851 forest trees were distributed free to villagers, public departments and residents, being a considerably less amount than that noted for last year, and 607 fruit trees sold for Rs 132 in accordance with the new rules regulating sale of transplants, sanctioned by Government from December last

The garden stock compares with last year as under —

	Fruit trees.	Forest trees
1889 90	63,614	55,901
1890-91	56,271	56,478

Kumaun Division.—Rupees 313 were spent on up-keep of forest gardens at Haldwáni and Chorgalia, from whence the distribution of lime trees to forest stations has now commenced.

Garhwal Division.—Rupees 32 were expended on sowing a further five acres at Chopra, but with poor success. The locality is in every way unsuited for artificial reproduction, being exposed to sun, frost and drought. The restocking of the area will in time take place by encroachment of the sál forest around the edges. Up-keep of forest gardens cost Rs. 146, and attention must be directed in future to the cultivation of the Malta lemon to the exclusion of other trees, for this fruit is much appreciated medicinally in the fever stricken country at the foot of the hills.

Ganges Division.—The protection by wire fencing and general up-keep of the garden and mango grove at Haldukhota and Saneh cost Rs. 278. The gardens are in good order.

Jhansi Division.—Rupees 227 were expended in keeping up and extending the plantations at Sukhwan-Dhukwan and Ganupura. No useful purpose is served by this expenditure and the work should be discontinued. Artificial reproduction in Bundelkhand should in future be carried out by means of sowings, broadcast or in pits, of such trees as will thrive in the climate and soil obtainable there, the seed being collected and forwarded from the submontane forests.

Lalitpur Division.—Teak seed was sown at Kachnoda, Dudhai and Sairwans, but did not germinate. The cost amounted to Rs. 51. More suitable species would be the albizzias, shisham and babúl.

7.—Climber Cutting.

35. Climbers were cut over about 29 square miles at a cost of Rs. 1,157, or about Rs. 40 per square mile, a rate which compares very favorably with that charged last year. Colonel Campbell suggests the suitability of climber cutting preceding the fellings instead of following them, for, though the work may be slightly more expensive, the damage done to the surrounding standards by felling trees in a network of green creepers will be obviated, and it may be added that it would be most advantageous for the executive staff to be obliged by these operations to gain a more intimate knowledge of the locality of the future timber works.

36. The following table gives the work by divisions:—

Kumaun Division—

	Acres
Jaunla sál	2,280
Horai	1,033
Sanáni	2,515
Total ...	5,828

cost Rs. 313 or 10·3 pie per acre.

Garhwal Division—

	Acres.
North Patli Dún, compartments 9, 10, 11, 12 and 13	2,234
Rehar, E and F	2,302
Kotah, 7 and 8	954
Total ...	5,490

cost Rs. 582 or 11·7 pie per acre.

Ganges Division—

	Acres.
Dogadda, compartment 2	965
Kothri, 3 and 4	1,238
Kansur, 3 and 4	549
Mandalti, 5 and 6	723
Total ...	3,475

cost Rs. 260 or 14·3 pie per acre.

In other divisions these operations are not necessary.

8.—Experiments and Exotics.

37. The measurements relating to the growth of sál in various parts of the circle are appended (Appendix C), the figures showing that the annual increment of girth

is generally smaller throughout the submontane forests than usual, and in the case of the Kumaun Division markedly so. Mr. Hobart-Hampden astutely suggests that this falling off in growth may be attributed to the very profuse seeding of the sál during the year, and this theory is borne out by the statistics available for 1886-87, when sál also seeded very freely These measurements which have continued for seven years are proving valuable now that improvement fellings have been started in the surrounding forests.

38. The attempt noted in para. 46 of the report of last year to aid in the natural reproduction of haldu was unsuccessful, and the theory then advanced is consequently strengthened.

39. Various experiments in coppicing sál, shisham and khair were carried out in the Kumaun Division. It was proved that sál coppices fairly well up to 3½ feet girth and feebly even up to 4½ feet; that the trimming of sál stumps flush with the ground was not in any way markedly advantageous, and that it sufficed if the stumps were cut at an angle, so as to prevent lodgment of moisture and consequent decay. A girth of 1½ to 2 feet is considered, however, to be the most suitable size for the production of vigorous and sound shoots.

40. Much has still to be learnt as to the coppicing qualities of the khair. Experiments led to the conclusion that this tree pollards better than it coppices, and the growth of the new shoots does not, so far as these experiments have proceeded, point to success in raising khair trees of sufficient average girth to yield kattha, but at present the data available warrant no final expression of opinion.

9—Communications, Buildings and other works.

a.—Roads.

41. The detail of the work done in the circle is given below :—

	Miles.	Chains.	Rs.
New cart roads	25	3	3,609
New paths	90	21	3,911
Total ...	115	24	7,520
Temporary export roads under AII	75	70	1,201
Repair of existing roads	1,776	14	22,153
Total ...	1,960	28	30,874

The expenditure for the preceding year was Rs. 35,813. The cost of repairs has been considerably reduced and may perhaps be further lessened by continuance of the system of repairing only half width of such roads as are not expected to carry much traffic during the season. There is no doubt but that the excellent system of roads and paths in this circle facilitates protection as well as export enormously, but care must be taken not to permit the expenditure to become excessive. In the submontane forests road work is now nearly completed, but much remains to be done in the hill forests and in Bundelkhand.

b.—Buildings.

42.

	No.	Cost. Rs.
New buildings	24	9,520
Repairs and improvement	148	4,575
Total ...	162	14,095

The charge in the preceding year was Rs. 17,204.

Much building still remains to be done, chiefly in erecting quarters for native officials in the Ganges, Kumaun and Naini Tal Divisions, whilst in Bundelkhand quarters for Divisional Officer and subordinates are urgently required.

c.—Other Works.

43.

	Rs.
New works	898
Maintenance	246
Total ...	1,144

The cost last year was Rs 597 The amount is almost entirely expended on the improvement of the water supply, and further expenditure in this direction is desirable The divisional detail is given below —

a —Roads

44 **Naini Tal Division—**

		Rs
New roads	...	1,825
Repairs		776
	Total	2 601

Five miles 54 chains of new road were made, 15 miles 31 chains of bridle path were improved and widened and the construction of the Airadeo cart road commenced.

Kumaun Division—

		Rs.
New roads		1 483
Repairs		7,516
	Total	8 990

Five miles 30 chains of cart road were constructed and 51 miles 48 chains of paths, whilst 12 miles of temporary export paths were also arranged for Much of the amount entered under repairs is outside the ordinary expenditure on maintenance, widening, improvement of gradient and walling on important cart roads being included

Garhwal Division—

		Rs
New roads ..		1,913
Repairs	...	8 575
	Total	10 488

The expenditure on new roads is chiefly balance due for works carried out last year Three miles 64 chains of new cart road was constructed.

The repairs to roads show a saving of nearly 20 per cent., effected by reducing the contract prices and width of road repaired, in some cases paths were abandoned as useless

Ganges Division—

		Rs
New roads	.	379
Repairs .	..	5,046
	Total	5,425

Little work is necessary in this division on roads, but the cost of repairs must on account of the hilly nature of the country always be high

Jhansi Division—

		Rs
New roads		120
Repairs	.	90

A new road to Bajna, about 5 miles long, was made, and 18 miles of existing forest roads were repaired

Lalitpur Division—

		Rs
New roads	.	*Nil*
Repairs	.	100

Ten miles of existing forest roads were repaired

Banda Division—

	Rs
New roads	1,800
Repairs	50

A good cart road, 14 feet wide and 11 miles 46 chains long, was made from Kalianpur *via* Chauri to Markundi at the above cost Rupees 50 was spent on repairing the road to Kolawa

b.—Buildings.

45. **Direction.**—Rupees 595 were expended in improving the upper storey of the office building and relaying the flooring which had much suffered from exposure. It will now be necessary to glaze the west verandah to protect the upper rooms from the damp, as the situation is much exposed.

Naini Tal Division—

	Rs.
Repairs	97
New buildings	835

Two forest guards' huts were built and Rs. 600 paid towards construction of a charcoal depôt at Naini Tal rendered necessary by the arrangements for the station supply.

Kumaun Division—

	Rs.
Repairs	1,556
New buildings	3,481

The expenditure in new buildings is divided between four rest-houses and six quarters for forest and revenue officials. During the last few years much has been done in this division in providing suitable shelter and much yet remains to be done.

Garhwal Division—

	Rs.
Repairs	1,520
New buildings	3,154

One rest-house was built, four forest guards' quarters completed and one commenced.

Ganges Division—

	Rs.
Repairs	436
New buildings	1,890

The new buildings include one rest-house and one forester's quarters. This division is urgently in want of suitable accommodation for subordinates : the constant change of Divisional Officers has retarded this work, which must be pushed on.

Jhansi Division—

	Rs.
Repairs	122
New buildings	100

Four forest guards' huts were built and existing buildings maintained.

Lalitpur Division—

	Rs.
Repairs	136

No new buildings were erected.

Banda Division—

	Rs.
Repairs	113

No new buildings were built.

c.—Other Works.

46. **Kumaun Division—**

	Rs.
Maintenance	100
New works	537

The expenditure on new works was devoted exclusively to the building of wells, tanks and canals to improve the water supply. There are four wells in hand at present, and money given for this object in the Kumaun Bhabar may be considered to be a good vestment.

Garhwal Division—

	Rs.
Maintenance	138
New works	361

The new works consisted of well sinking.

Ganges Division—

An expenditure of Rs. 8 was incurred in clearing compounds.

CHAPTER IV.

OUTTURN AND WORKING.

47. The outturn of the year was as follows in timber and fuel :—

	C ft.	C ft.
Timber, green	714,227	9,61,568
" dry	247,341	
Fuel, green	455,012	1,750,842
" dry	1,295,830	
Total, green and dry .		2,712,410

Compared with the outturn of the previous year, there is a total increase of 23,628 cubic feet, which is made up of an increase in green material of 141,265 cubic feet and a decrease in dry of 117,637 cubic feet The extension of improvement fellings and the intentional temporary closure of dry wood operations is responsible for these results.

48. The outturn of bamboos increased by 65,958 score, the figures for the year being 824,627 score, and as the average selling price increased by more than Re. 1 per 100 score, it is evident that the rearrangement of the local price lists was satisfactory.

49. The increase in outturn in minor forest produce and grazing is represented by a rise in value of Rs. 10,000, Rs. 5,000 of which, however, is merely deferred revenue from the Kumaun Division, all other divisions where comparison is made with the outturn of last year showing unimportant variations.

50. The following statement is the summary of the main facts of the year's outturn and working :—

No			1890 91.	1889-90	Increase	Decrease
1	Green trees felled	No	93,334	91,810	1,524	.
2	Outturn in timber and fuel	C. ft	1,169,239	1,027,974	141,265	...
3	Outturn in timber, including timber from dry trees,	" "	961,568	969,433	.	7,865
4	Value of above	Rs	3,59,283	3,77,149	..	17,866
5	Outturn in green timber	C ft	714,227	685,388	28,839	...
6	Value of above	Rs	2,73,992	2,81,597	...	7,605
7	Outturn of dry timber ...	C ft.	247,341	284,045	...	36,704
8	Value of above	Rs	85,291	95,552	...	10,261
9	Outturn of green timber removed by departmental agency	C. ft	35,549	15,974	19,575	
10	Value of above	Rs	6,500	4,146	2,354	...
11	Outturn of green timber removed by exporters .	C ft	492,963	512,415	...	19,452
12	Value of above .. .	Rs	2,26,665	2,58,378		31,713
13	Outturn of green timber removed by free grantees and right holders	C ft	185,715	156,999	28,716	...
14	Value of above ...	Rs	40,837	39,323	1,514	...
15	Outturn of dry timber removed by exporters ...	C ft	222,337	270,139	..	47,802
16	Value of above	Rs	78,190	95,458	...	17,268
17	Outturn of dry timber removed by free grantees and right-holders	C ft	25,004	13,906	11,098	.
18	Value of above	Rs.	7,101	3,521	3,580	...
19	Outturn of firewood	C ft	1,750,842	1,719,349	31,493	.
20	Value of above ...	Rs	58,982	55,270	3,712	...
21	Outturn of fuel removed by departmental agency,	C ft	157 664	173,824	...	16,160
22	Value of above	Rs	34,885	38,164		3,279
23	Outturn of fuel removed by purchasers	C ft	1,472,298	1,309,933	162,365	.
24	Value of above ..	Rs	23,097	17,499	5,598	
25	Outturn of fuel removed by free grantees and right holders.	C ft	120,880	235,592	.	114,712
26	Value of above	Rs	1,000	1,995	...	995
27	Timber sold by departmental agency	C ft	8,648	19,306	.	10,658
28	Receipts from above	Rs	2,632	4,146	...	1,514
29	Timber sold direct to purchasers	C ft	715,300	782,554	...	67,254
30	Receipts from above	Rs	3,13,602	3,50,819	...	37,217
31	Fuel sold by departmental agency ..	C ft	164,610	176,672	...	12,022
32	Receipts from above	Rs	35,885	38,164	.	2,279
33	Fuel sold direct to purchasers	C ft	1,472,298	1,309,933	162,365	...
34	Receipts from above	Rs.	23,097	17,499	5,598	.
35	Bamboos sold	Scores	824,627	758,669	65,958	.
36	Value of above	Rs	1,10,000	94,076	16,824	...
37	Minor produce and grazing (including drift wood),	"	91,489	80,869	10,620	.
38	Value of other receipts	"	3,614	11,976	...	8,362
39	Yield per square mile in cubic feet of timber and fuel	C ft	1,499	1,518	...	19
40	Value of above per square mile	Rs	231	244	...	13
41	Gross receipts " " " .	"	321	335	...	14
42	Net " " " " ..	"	183	190	.	7

51. The following two statements classify green timber and fuel under different methods of felling and the agency used in felling and export :—

I.—DESCRIPTION OF FELLING AND OUTTURN IN GREEN TIMBER AND FUEL.

	1890-91.		1889-90.		Increase.		Decrease.	
	No.	C. ft.	No.	C. ft.	No.	C. ft.	No.	C. ft
1. Regeneration (selection fellings).	44,081	772,009	36,109	685,292	8,872	86,717	...	...
2. Regeneration (coppice with standards)	152	14,017	...	...	152	14,017	...	...
3. Strip fellings ...	9,343	54,410	10,670	13,237	...	41,173	1,327	...
4. Amelioration improvement fellings.	16,949	167,327	4,810	37,031	12,139	130,296	...	...
5. Amelioration thinnings ...	5,369	78,189	5,407	72,986	...	5,203	38	...
Total fellings for sylvicultural reasons.	76,794	1,085,952	56,996	808,546	19,798	277,406	...	...
6. Unclassed fellings (clearances on boundary lines, fire lines and roads).	16,540	83,287	34,814	219,428	...	...	18,274	136,141
GRAND TOTAL ...	93,334	1,169,239	91,810	1,027,974	1,524	141,265	...	...

II.—AGENCY EMPLOYED IN FELLING AND IN THE EXPORT OF GREEN TIMBER AND FUEL.

	1890-91.		1889-90.		Increase.		Decrease.	
	No.	C. ft.	No.	C. ft.	No.	C. ft.	No.	C. ft.
Government.								
Regeneration (selection fellings).	9,572	93,229	5,959	70,214	3,613	23,015	...	...
Amelioration (thinnings) ...	325	2,794	1,358	18,506	...	...	1,033	15,712
Unclassed fellings ...	472	15,395	2,266	55,050	...	...	1,794	39,655
Total ...	10,369	111,418	9,583	143,770	786	...	...	32,352
Purchasers.								
Regeneration (selection felling).	30,596	582,684	25,723	530,738	4,873	51,946	...	...
Regeneration (coppice with standards)	152	14,017	...	...	152	14,017	...	...
Strip fellings ..	9,343	54,410	10,670	13,237	...	41,173	1,327	...
Amelioration improvement fellings.	16,945	167,231	4,810	37,031	12,135	130,200	...	...
Amelioration (thinnings) ...	871	13,224	346	1,748	525	11,476	...	...
Unclassed fellings ...	9,616	40,340	25,525	144,101	...	...	15,909	103,761
Total ...	67,523	871,906	67,074	726,855	449	145,051	...	...
Rightholders and grantees.								
Regeneration (selection fellings).	4,813	96,096	4,427	84,340	386	11,756	...	...
Amelioration improvement fellings.	4	96	...	...	4	96	...	...
Amelioration (thinnings) ...	4,173	62,171	3,703	52,732	470	9,439	...	...
Unclassed fellings ...	6,452	27,552	7,023	20,277	...	7,275	571	...
Total ...	15,442	185,915	15,153	157,349	289	28,566	...	...
GRAND TOTAL ...	93,334	1,169,239	91,810	1,027,974	1,524	141,265	...	...

Selection fellings took place in all divisions : strip fellings in the Rehar forest in Garhwál ; amelioration thinnings in Naini Tal and Kumaun ; and improvement fellings in Kumaun, Garhwál and Ganges.

52. The following statement shows the number of trees felled by species :—

	1890-91.		1889-90.		Increase.		Decrease.	
	No.	C. ft.	No.	C. ft.	No.	C. ft.	No.	C. ft.
Sál	26,629	3,00,257	33,992	326,132	...	...	7,363	25,875
Sain	3,054	75,855	1,905	58,570	1,749	17,285	...	...
Shisham	662	18,060	116	2,316	546	15,744	...	...
Tun	2	26	106	3,686	...	...	104	3,660
Haldu	887	30,570	372	29,987	515	583	...	...
Chír	6,902	2,66,188	8,644	297,684	...	...	1,742	31,501
Oak	2,609	2,05,811	2,949	154,232	...	51,579	340	...
Miscellaneous	51,989	2,72,477	43,726	155,367	8,263	117,110	...	...
Total ...	93,334	1,169,239	91,810	1,027,974	11,073	2,02,301	9,549	61,036
Net increase or decrease ...	...	...	...	...	1,524	1,41,265	...	...

53. The most important points shown in the above statements are as follows :—

i.—A slight increase in the number of trees cut, referable to green fuel operations in Bundelkhand from fellings of miscellaneous trees, whilst the number of the more important species cut varies only slightly. The decrease in sál occurs in the Garhwál Division, where improvement thinnings and unclassed fellings were restricted. The increase in sain is divided amongst the sub-montane divisions; that in shisham is referable to better sales in Kumaun. There is a falling off in demand for chír timber in Naini Tal, and an increase in oak fuel and charcoal with a decrease in the number of oak trees felled, following the removal of old trees in amelioration thinnings.

ii.—A large increase in outturn of green timber and fuel, owing to extension of improvement fellings, and a decrease in outturn of dry material, owing to restricted operations with a view to favouring the more important fellings of green timber.

iii.—A decrease of green timber removed by exporters, the sales of last season being quite abnormal; and an increase in green fuel removed by the same agency, owing chiefly to the produce of improvement fellings being sold by area and therefore fully utilized.

iv.—A marked increase in the amount of timber, green and dry, used by right-holders and free grantees, owing to increase of area burdened with rights and to a large grant of building timber to the Lansdowne cantonment.

v.—A falling off in the net results per square mile, attributable principally to the addition of comparatively unproductive forests to the area of the circle.

54. **Naini Tal Division.**—The outturn of timber amounted to 216,065 cubic feet, and of fuel to 537,336 cubic feet, an increase of 21,631 and 52,756 cubic feet respectively under these heads. The increase under timber is due to better sales to purchasers and larger demands by right-holders; that under fuel to increased direct sales, the demand for charcoal and lime being high, whilst departmental fuel operations declined owing to restricted commissariat demand. 1,648 dry trees, the victims of the fire of 1887, were felled in the Ránikhet Reserve and yielded 44,152 cubic feet fuel. The outturn of minor forest produce and grazing is represented by a sum of Rs. 5,950, or a decrease of Rs. 559 in last year's figures, owing to the reopening of grazing lands in the Ránikhet cantonment to commissariat cattle.

Kumaun Division.—The outturn of timber amounted to 246,802 cubic feet, and of fuel to 636,596 cubic feet, a decrease of 15,716 cubic feet and 126,143 cubic feet in last year's figures. The falling off in outturn of dry timber more than covers the difference under timber, whilst with fuel a less demand both by right-holders and by purchasers explains the variation. The outturn of bamboos rose from 44,396 score

to 102,626 score, this satisfactory increase being obtained by lowering the rates in the open blocks by 25 per cent to attract purchasers. The outturn from grazing and minor forest produce is represented by a sum of Rs 43,755, an increase of Rs. 11,379 referable to realization of deferred grazing dues

The improvement fellings in Kumaun extended over some 975 acres in the three proposed working circles. Two systems were attempted, the one being a sale by auction for a lump sum of the standing marked trees in a certain area, the other being an auction sale of the exclusive right to fell and export on payment of royalty at the revenue stations of marked trees in a certain area. The former system appears to be most remunerative so far as can be judged from our short experience, but the latter system has the advantage of superior check in the export both as regards registration of outturn and prevention of trickery. The outturn from these fellings during the year amounted to some 158,000 cubic feet of green material, but these figures convey no valuable information as, in the first place, there was much export from a part of these areas after the close of the financial year, whilst elsewhere cholera caused entire cessation of work so early as February, so that it is yet impossible to say what the average outturn per acre will be. To give some idea of the results of working it may be mentioned that 267 acres of improvement fellings in Horai sold under the first system for Rs 8,350, or Rs 31-4-0 per acre, and that the purchaser exported some 80,000 cubic feet of material of all sorts therefrom.

The outturn from kattha during the financial year was 592 maunds of a value of Rs 5,997. During the working season 2,111 trees were selected over an area of about 2,000 acres and yielded 357 maunds of kattha valued at Rs 3,845. It will evidently be necessary to provide for a considerable reduction in the royalty charged for kattha if we compel the khairahas to manufacture from trees not specially selected

Garhwal Division.—The outturn from this division shows a decrease of 35,706 cubic feet under timber and an increase of 19,844 cubic feet under fuel, the figures being 269,400 cubic feet and 182,482 cubic feet respectively The difference under timber is accounted for by poor demand in the Patli Dun forests both in selection and improvement fellings, and a comparative failure in export in the Rehar strip fellings, which supply purely local markets where the demand fluctuates greatly The increase under fuel is attributable to much of the outturn of the Rehar fellings left from last season having been disposed of as fuel.

The outturn from bamboos increased from 143,006 score to 165,623 score in spite of the introduction of the two year rotation system and consequent closure of one half of the productive area of the division, and the fact that rates were raised by 25 and 38 per cent to facilitate bamboo operations in the adjoining division of Kumaun

The outturn from grazing and minor forest produce shows a falling off of Rs 744 explained by the reduction in the area of the division The strip fellings in Rehar were continued, but, as noted above, the results were not so satisfactory as was hoped. 126 5 acres of 30 feet strips were felled over, the gross revenue amounting to Rs 7,603 from these operations, of which, however, Rs 4,113 was for refuse remaining in previous year's strips. A large quantity of material is still available from the strips of this year, early closure of the Rehar forest being imperative on account of the constant danger from fire. A careful comparison was made this season of the results of fellings under this working plan, where 150 and 100 feet strips with standards and 30 feet clear cut strips have all been attempted It is thought that preference should be decidedly given to the last method for the following reasons —

1—That establishment efficiently to supervise the fellings of coppice with standards in irregularly stocked forests is not available at present. To carry out this method successfully, a subordinate with good knowledge of forestry who could adapt his fellings to varying circumstances is necessary, and such a man cannot now be spared to devote himself entirely to the work.

ii.—The result of the broader strips is not satisfactory as regards reproduction. The number of seedlings is indeed larger on the broader strips, but the rank growth of grass and creepers and the greater danger from frost and fire quite counterbalances this advantage.

iii.—The 30 feet clear cut strips require less supervision, and the result in vigour of coppice shoots and in absence of dense undergrowth is satisfactory.

Ganges Division.—The outturn of timber and fuel amounted to 180,893 cubic feet and 357,020 cubic feet, being an increase of 5,216 cubic feet and 77,973 cubic feet in last year's yield. There was a large increase of green timber felled and a considerable decrease in export of dry timber. For the former free grantees are chiefly responsible, the year having been one of considerable constructive activity in the Lansdowne Cantonment, as well as of increase in area of forest burdened with rights. The increase in fuel is attributable to larger direct sales; the collection made for the Hardwár fair may well account for this.

The outturn of bamboos, 528,412 score, exceeded that of the previous year by 15,534 score in spite of the fact that rafting in the Ganges was prevented for some weeks by the obstructions to rafting consequent on the arrangements made for the Hardwár fair. Next year it is intended to introduce into this division a uniform system of a two year rotation which has answered so well in Garhwál. The outturn of grazing and minor forest produce, represented by a sum of Rs. 13,572, shows a falling off of Rs. 853 in minor forest produce and an increase of Rs. 896 in grazing dues.

Jhansi Division.—The outturn from timber and fuel was 2,835 cubic feet and 20,902 cubic feet, respectively, a decrease of 840 cubic feet and an increase of 11,622 cubic feet under these two heads. The increase in fuel is due to improvement in direct sales. The outturn from bamboos amounted to 4,386 score, an increase of nearly 20 per cent. in last year's outturn, referable to encouragement of export following improved local knowledge. Rupees 5,598 is the value of grazing and minor forest produce, a sum which does not materially vary from that realized last year.

Lalitpur Division.—There is a decrease in timber of 3,010 cubic feet and an increase in fuel outturn of 7,030 cubic feet, the figures for the year being 4,352 cubic feet and 9,470 cubic feet. The falling off in timber is due to restriction of departmental operations without corresponding increase in sales to purchasers, whilst direct sales of fuel largely increased. The outturn figures for bamboos are most unsatisfactory. The outturn fell from 48,341 score to 20,966 score, and this may be attributable partly to the unsettled state of the district affecting the forest areas considerably, and partly to a change made during the working season from the system of extraction by departmental agency and local sale to a system certainly more advisable, which, while offering more advantageous terms to direct purchasers, also provided for the supply of more distant markets, such as Cawnpore. The former system was being worked at a loss, and a careful inspection of the bamboo forests of Lalitpur proved that more extended operations were necessary, though they have not been immediately remunerative during the few weeks' trial before the close of the financial year. The outturn of grazing and minor forest produce shows a satisfactory increase of Rs. 682, the figure for the year being Rs. 5,248.

Banda Division.—The outturn of timber and fuel shows totals of 41,221 cubic feet and 7,036 cubic feet, being 20,560 cubic feet more and 11,589 cubic feet less than last year. The increase in timber is ascribed to more extended departmental operations, and the decrease in fuel to less demand by direct purchasers. There is a decrease in bamboos of 4,036 score, the outturn for the year being 1,265 score. Grazing and minor forest produce shows an outturn valued at Rs. 3,318, or a decrease of Rs. 258 occurring under the latter item.

CHAPTER V.

FINANCIAL RESULTS.

55. The statement below shows the average financial results of the past six years as compared with the year under report :—

Year.	Square miles.	Gross revenue.	Expenditure.			Net surplus.	Revenue and expenditure per square mile of the circle.					Percentage of gross revenue and expenditure		
			Conservancy and works.	Establishment.	Total.		Gross revenue.	Conservancy and works	Establishment.	Total.	Surplus.	Conservancy and works	Establishment.	Total.
		Rs.	Rs	Rs	Rs.	Rs	Rs.	Rs	Rs	Rs	Rs.			
Average of six years from 1884 85 to 1889-90.	1,724	5,15,186	1,43,692	1,15,536	2,59,228	2,55,958	299	83	67	150	148	28	22	50
1889 90 ...	1,754	5,92,943	1,46,207	1,13,713	2,59,920	3,33,023	338	83	65	148	190	25	19	44
1890-91 ..	1,810	5,80,384	1,42,656	1,06,912	2,49,568	3,30,816	321	79	59	138	183	25	18	43

The area of the circle has indeed increased by 56 square miles, but this area is chiefly unproductive of revenue, so that the financial results well bear comparison with those of the previous year. A decrease in expenditure occurs under establishment, the outlay under conservancy and works being almost normal, but the results per square mile are lower in consequence of the increase to the circle area. The surplus revenue is within Rs. 2,000, and the gross revenue within Rs. 12,000 of the highest on record, a result which would have been still more favorable had not unsuitable weather and much sickness interfered injuriously with the short export season.

56. Turning to revenue and expenditure by divisions, the following statement will show that the Garhwal Division has, as regards surplus revenue, to relinquish the first place to Kumaun, although the gross revenue still remains the highest in the circle. The diminution of 20 square miles in the area of the former is no doubt partly responsible for this change, but more so is the fact that whilst the fellings of mature timber in both divisions are becoming yearly restricted, the area under improvement fellings, which require little expenditure in proportion to revenue collected, has been most opportunely extended in Kumaun.

The Ganges Division shows the highest gross revenue on record in that division owing to favorable auction sales of bamboo monopolies by Mr. B. B. Osmaston, Assistant Conservator, and to increased export in timber.

In Bundelkhand the Jhánsi and Lalitpur Divisions show a fair surplus, but the Bánda Division again appears with a deficit, the result of failure to dispose within the financial year of produce collected by departmental agency :—

Division.	Receipts		Charges.		Surplus.		Deficit.		Percentage of charges on receipts		Difference.		
	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90	1890-91.	1889 90.	1890-91	1889-90	Receipts.	Charges	Net results.
	Rs	Rs	Rs.	Rs	Rs	Rs	Rs	Rs			Rs.	Rs	Rs.
Direction ...	15	5	22,408	23,230	...	.	22,393	23,225	.	...	+10	−822	+832
Naini Tal ..	59,193	58,743	46,518	43,411	12,675	15,332	...	..	78 58	73 80	+450	+3,107	−2,657
Kumaun ..	1,70,570	1,55,733	50,980	61,494	1,19,581	94,239	...	...	29·89	39 4	+14,837	−10,505	+25,342
Garhwál ...	1,51,012	2,13,366	63,507	66,088	1,17,505	1,47,278	...	..	35 08	30 9	−32,354	−2,581	−29,773
Ganges ..	1,47,804	1,39,813	47,692	45,214	1,00,112	94,599	...	...	32 26	32 34	+7,991	+2,478	+5,513
Jhansi ..	8,182	7,679	6,636	8,476	1,546	.	...	797	81 10	110 38	+503	−1,840	+2,343
Lalitpur ..	8,914	11,461	5,636	5,703	3,278	5,668	...	...	63·22	50·55	−2,547	−157	−2,390
Banda ..	4,694	6,143	6,182	6,214	...	...	1,488	71	131·70	101·15	−1,449	−32	−1,417
Total .	5,80,384	5,92,043	2,49,568	2,59,920	3,54,697	3 57,116	23,881	24,093	43·00	43·88	−12,559	−10,352	−2,207

57. A comparative statement of receipts and charges by main heads is given below, and is followed by tables showing receipts and expenditure by main budget heads :—

	Receipts.					Charges.				
	Amount.		Difference in 1890-91.		Budget heads.	Amount.		Difference in 1890-91.		Budget heads.
	1890-91	1889-90.	Increase.	Decrease.		1890-91.	1889-90.	Increase.	Decrease.	
	Rs.	Rs.		Rs.		Rs.	Rs.		Rs	
I.—Departmental operations	42,584	45,621	...	3,037	I	31,320	32,565	...	1,245	Debits various to suit each division (*vide* Form No. 62).
II.—Other heads of revenue,	5,37,800	5,47,322	...	9,522	II to V	1,05,085	1,08,940	...	3,855	
III —Formation, protection and improvement of forests.	...	...	...	...	...	1,13,163	1,18,415	...	5,252	
Total ...	5,80 384	5,92,943	...	12,559		2,49,568	2,59,920	...	10,352	

Receipts.

Year.	I. Timber and other produce removed from the forests by Government agency.	II. Timber and other produce removed from the forests by purchasers.	III. Confiscated drift and waif wood.	IV. Revenue from forests not managed by Government.	V. Miscellaneous receipts.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1890-91 ..	42,584	5,32,607	1,564	15	3,614	5,80,384
1889-90 ..	45,621	5 34,053	1,293	...	11,976	5,92,943
Difference, 1890-91 More ...	...	...	271	15	...	...
Difference, 1890-91 Less ..	3,037	1,446	...	...	8,362	12,559

Expenditure.

A.— Conservancy and Works.

Year.	I. Timber and other produce removed from forests by Government agency	II. Timber and other produce removed from forests by consumers or purchasers.	III. Confiscated drift and waif wood.	IV. Revenue from forests not managed by Government agency	V. Rent of leased forests and payments to shareholders	VI. Live stock, stores, tools and plant.	VII. Communications and buildings.	VIII Demarcation, improvement and extension of forests	IX. Miscellaneous.	Total.
	Rs.	Rs.			Rs.	Rs.	Rs	Rs.	Rs	Rs
1890-91 ..	21,238	27,087	...	...	539	13,692	44,911	33,434	1,755	1,42,656
1889-90 ...	23,312	25,121	...	...	503	9,582	52,425	33,707	1,497	1,46,207
Difference, 1890-91 More...	...	1,966	...	...	36	4,110	...	...	258	...
Difference, 1890-91 Less ...	2,074	...	...	...	...	...	7,514	333	...	3,551

B.—Establishments.

Year.	I. Salaries.	II. Travelling allowances.	III. Contingencies.	Total.
	Rs.	Rs.	Rs.	Rs.
1890-91 ...	87,890	13,100	5,922	1,06,912
1889-90 ...	95,175	13,189	5,349	1,13,713
Difference, 1890-91 More ...	...	...	573	...
Difference, 1890-91 Less ...	7,285	89	...	6,801

From these statements it will be seen that there is not any considerable variation under receipts save under the head miscellaneous, accounted for by the credit of Rs. 7,700 given last year for an elephant license. Under charges A the principal decrease is under "Communications and buildings," and is due to road making in the circle approaching completion. The saving effected in B charges is on account of lower paid officers being in administrative and controlling charge.

58. The difference in value of timber and other produce and of stock in hand at the beginning and close of the year is noted below :—

	Rs.
Value on 1st April 1890	1,49,950
Ditto 31st March 1891	1,64,657
Balance in favor of the year ...	14,707

whilst the outstandings due to the department at the same periods were as follows :—

	By contractors.	On account of revenue.
	Rs.	Rs.
On 1st April 1890	3,512	4,664
On 31st March 1891	5,415	2,504
Balance for the year ...	1,903 against the year.	2,160

59. The value of the transactions of the year compares with the average of the past four years as under :—

	Rs
Cash surplus	3,30,816
Increased value of stock	14,707
Outstandings due ...	7,919
Total ...	3,53,442
Average of past four years ...	2,99,791

CHAPTER VI.

GENERAL REMARKS.

60. During the year the unsatisfactory arrangements for the charcoal supply to the settlement of Naini Tal was prominently brought forward when, at the close of the season of 1890, owing principally to the seizure of contractors' coolies for private carriage, then urgently required, a famine occurred and the holders of charcoal ran that commodity up to a fancy price to the great inconvenience of the residents. It is evident that arrangements for the retail supply of necessities of this description are more properly the duty of a municipality responsible for the welfare and comfort of those from whom it holds office than of a department which manages the forests in the neighbourhood; but long custom having imposed the work on the department, steps

were promptly taken to prevent a recurrence of this unpleasantness, and the Divisional Officer has now arranged to ensure a permanent supply of charcoal at fixed rates, including delivery.

61. The want of method in the supply of fuel, as noted in para. 24 of this report, also attracted attention, and the Municipal Committee was addressed with proposals, which, however, did not receive their assent, they preferring a policy of inaction. It was pointed out to the Committee that the "jhampanis" were, under existing arrangements, profiting largely at the expense of their employers and of Government, and it was proposed, whilst raising the price of wood tickets to Rs. 2, to start improvement fellings in the vicinity of the settlement, where, in many places, they are now required, and permit the marked trees to be utilized, thus securing an adequate supply of fuel to the residents whilst benefiting the forests. The collapse of the present system, which permits the removal for sale of an unlimited quantity of fuel at a nominal price of eight annas per mensem, is merely a question of time. That dead and fallen timber from the restricted area within the reach of jhampanis can continue to supply the requirements, both European and native, of a large settlement is impossible; and the working of the present system is marked by incessant illegalities and constant friction between the "jhampanis" and the officials of this department. The matter is well worthy of consideration, and the Municipal Committee might be called upon to suggest some other scheme in the place of that rejected, by which the question of fuel and charcoal supply to the settlement could be arranged in a manner at once convenient and equitable.

62. The results of the working of the bamboo forests may well, as in former years, be the subject of special remark. It has been before mentioned that the system of a two-year rotation had been introduced into the Garhwál Division with the most marked success, and will be made general in the submontane forests next season. A glance at Appendix E will show that the circle outturn, which has since 1883-84 fluctuated between 757 and 1,118 thousand score, has not materially increased this season, but that the sale price, which eight years ago stood at Rs. 7·39 per 100 score, has now risen to Rs. 13·44 for the same number, and that during the last three years, namely, the years since the closure system has been in force, the price has risen annually by more than Re. 1 per 100 score, a conclusive proof that the quality of the crop has improved, whilst, as to quantity, the average yearly yield remains the same, although the crop is taken from a much restricted area.

63. The endeavour to diminish the number of dangerous carnivora by granting licenses to shoot in closed forests during the hot weather was not so successful as was anticipated. Rupees 568 were indeed received for the issue of five licenses, but the number of tigers destroyed was small, chiefly owing to the fact that sportsmen were not thoroughly acquainted with the localities and therefore failed to find the tigers. No injury to the closed forests resulted from the new system, which, even if it does not effect its purpose, at least prevents complaints being made as to unnecessary closure to sportsmen of Government forests.

64. Little can be said at present of the results of the amalgamation of the Bundelkhand Divisions under the charge of a departmental officer. There was a general opinion amongst both District and Forest Officers that the time had arrived for this change in management, which finally received the sanction of the Local Government in G. O. No. $\frac{312F.}{233A.-7}$, dated 10th April 1891, after the close of the financial year.

Mr. J. M. Blanchfield, Sub-Assistant Conservator, had been on special duty in Bundelkhand since 4th December 1890, with a view to better acquaintance with these forests, where, it is expected, he will be of great assistance to the District Officers. He assumed divisional charge in April 1891.

65. The thanks of the department are again due to Mr. J. Oakeshott, C.S., for his work as Forest Settlement Officer in the Dolmar-Morar forests, this settlement having been carried out in January and February 1891.

66. The question of improving the position and increasing the number of the clerical staff in the circle is now under consideration by the Local Government; in spite of increase of work, Divisional Officers report generally favorably of their office establishments, but it is evident that great difficulty is sometimes experienced in keeping current work up to date. The Conservator's office was, as usual, kept in good order by the care and assiduity of Mr. Sheils, the Head Clerk.

67. The details given in this report form a record of the good work done by the Divisional Officers of the circle, to which the Officiating Conservator need only add an expression of his appreciation of the energy and care displayed during an unusually trying year.

NAINI TAL:
Dated the 30th June 1891.

S. EARDLEY-WILMOT,
Offg. Conservator, Central Circle, N.-W. P. and Oudh.

APPENDICES

AND

ANNUAL STATEMENTS.

Appendix A.

Unexecuted work detailed in Plans of Operations for 1890-91.

Naini Tal Division.	
Roads and paths	
Bajaon path	Line laid out · path not made.
Roads from Pangoth to the Tit forest	Not done.
Export roads from Shamkhet *viâ* Kunj to join the Agshora road.	Not done: no good line found.
Buildings	
Gagar Forest Bungalow	Site chosen, and work will shortly commence
Houses for forest subordinates at Mahraura	
Subjia	Houses built at Bagar and Batronj
Hartap	
Champhi	
Batronj	
Fire Conservancy.	
The practice of burning kaccha lines in chir forests will be abandoned and the money devoted to keeping the lines free of spines.	Not done throughout; but some of the more useless lines have been abandoned
Sale of grass	
The grass from Kathallekh and Gana deoh closed portions will be sold by auction.	Put up to auction, but no suitable offer made
Kumaun Division	
Buildings.	
Chúna Khán chauki	Owing to death of contractor was not done.
Bungalow at Tanakpur	Postponed.
Roads	
New road from Chúna Khán to Bareni and from Kamola to Garapú.	Road aligned, but not constructed.
Construction of various bridle paths	Not done
Jubileeganj-Chandani road	Project abandoned
Rail bridge over the Ghan stream	Not done owing to cholera.
Cart road from Dándagot to Chandadi	Work postponed.
Wells	
Construction of one or two wells on the road between Garapu and Pipal parao.	Not done: not pressing.
Fire protection	
i.—Surveying and mapping of the edge of fire Conservancy in Lakhman Mandi and the grass land by the Horai bungalow	Not done owing to the services of a Surveyor not being obtainable.
ii.—Clearing of refuse from the lines	Not done in the Chaubhainsi Range.
iii.—Making a pakka sot line of 100 feet in the Chaubhainsi Range	Not done
Demarcation	
Straightening of the Chaunsila and Nihal Western lines.	Not done owing to the services of a Surveyor not being obtainable.
Fencing	
Fencing of Lakhmau Mandi, south-east corner ...	Project abandoned.
Climber cutting.	
According to Nandhaur plan scheme	Not done.
Improvement fellings	
Dúlagad marked trees . .	No sale for the ballis. Haldu sold.
Selling the marked trees in Laibar and Kumia and marking others in their place.	Sál, sain and jamun were marked, but the sál was not sold, the contractor failing.
Salam marked area	Not sold
Dangaona charcoal making	Abandoned.
Garhwal Division	
Surveys and Working Plans.	Work partly done
Roads.	
Haldnwa to Jalaban	Postponed for next season on account of correspondence with the District Officer
Bunjadeh to Lohachaur	Postponed for want of funds
Buildings.	
Bhawan Khal rest house	Postponed for further consideration on account of correspondence with the district officials about site.
Forest guards huts at Lalpuri Jhulon and Kalu Sahid,	Work in progress
Wells.	
Jalaban and Sikaridera wells	Jalaban well finished. Sikaridera one in progress.

UNEXECUTED WORK DETAILED IN PLANS OF OPERATIONS FOR 1890-91—(*concluded*).

REVENUE	
North Patli Dún.	
Sál in Adnala, 95,000 cubic feet	Only 79,612 cubic feet. prepared by purchasers.
South Patli Dún	
Two thousand sál trees	Two hundred only taken by exporters.
Kota	
Compartments Nos 1 and 2 sál trees	Only 1,195 cubic feet sál timber prepared from these compartments, the timber being inferior.
Chilka.	
Five thousand cubic feet sain to be extracted from Sanguri	Not done: no purchaser could be found.
Green miscellaneous timber	No demand.
Ganges Division	
Improvement fellings	
Kansur, 13 and 14	Trees not yet marked, as there is no sale for inferior timber
Climber cutting	
Dabina, 1, 2, 44, 55	Climber cutting not done here, as the area operated upon was considered sufficient for one year.
Rawasan, 2 and 6	
Sample plot	Not selected in Udepur, as Division Officer's time was taken up with other duties.
Buildings	Office and check depôt not built at Lansdowne, as there appeared to be no necessity for them.
Jhansi Division	
No unexecuted works	
Lalitpur Division.	
No unexecuted works	
Banda Division	
Export of lime from the Chauri Chulha forests with proposals for strip fellings to burn the lime.	Not carried out owing to contractors not being found to undertake the work on any terms
Improvement fellings in the Maldar forest ...	Not given effect to owing to there being no demand for the thinnings.
Fire Conservancy	
Arrangements to be concluded with the Political Agent of neighbouring States to burn along the outer edge of the forests	None were made this year and no special expenditure incurred during the year.

NAINI TAL:
Dated the 30th June 1891.

S EARDLEY-WILMOT,
Offg Conservator, Central Circle.

Appendix B.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, CENTRAL CIRCLE.

AREAS CLOSED TO GRAZING IN THE CENTRAL CIRCLE, 1890-91.

Divisions.	Total area.		Area closed to grazing, or only grazed over by exporters' cattle.		Percentage of area of division closed.
	Acres.	Square miles.	Acres.	Square miles.	
Naini Tal Division.					
Naini Tal Sub-division	46,865	73	147	·229	3·13
Bámikhet Sub-division	43,051	68	6,502	10 159	15·103
Total ...	89,916	141	6,649	10·388	7·394
Kumaun	298,548	467	178,310	279	59·72
Garhwál	314,357	491	259,160	405	82·44
Ganges	257,003	401	155,798	243	60·59
Jhánsi	30,602	48	2,040	3	6 66
Lalitpur	92,270	144	2,004	3	2 17
Bánda	75,454	118	*Nil.*	*Nil.*	*Nil.*
Total ...	1,158,210	1,810	603,961	944	52·14

	Acres.	Sq. m.
Reserves	1,022,835	1,598
Protected	59,921	94
Unclassed	75,454	118
Total ...	1,158,210	1,810

NAINI TAL:
Dated the 30th June 1891.

S. EARDLEY-WILMOT,
Offg. Conservator, Central Circle, North-Western Provinces and Oudh.

Appendix C.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, CENTRAL CIRCLE.

ABSTRACT RECORD OF THE GROWTH OF SÁL IN SPECIMEN PLOTS IN THE KUMAUN SUB-HIMALAYAN FORESTS.

Year.	Kumaun Forest Division, plots and year of first observation.								Garhwál Forest Division, plots and year of first observation.								Ganges Forest Division, plots and year of first observation.			
	Lakhman Mandi, 1884-85.		Sunmun Thapla, 1884-85.		North Khonani, 1884-85.		Saláni, 1887-88.		Amtanola, 1884-85.		Raninagal, 1887-88.		Dhikala, 1887-88.		Domunda, 1887-88.		Andher Majhera, 1888-89.		Chaukham, 1888-89.	
	Thinned area.	Un-thinned area.	Thinned area.	Un-thinned area.	Thinned area.	Un-thinned area.	Thinned area.	Un-thinned area.	Thinned area.	Un-thinned area.	Thinned area.	Un-thinned area.	Thinned area.	Un-thinned area.	Thinned area.	Un-thinned area	Thinned area.	Un-thinned area.	Thinned area.	Un-thinned area.
	Acres and number of trees, 2—114	Acres and number of trees, ½—71	Acres and number of trees, 2—115	Acres and number of trees, ½—55	Acres and number of trees, ...	Acres and number of trees, 1—74	Acres and number of trees, ...	Acres and number of trees, 1—50	Acres and number of trees, 2—112	Acres and number of trees, ½—64	Acres and number of trees, 2—131	Acres and number of trees, ½—79	Acres and number of trees, 2—160	Acres and number of trees, ½—191	Acres and number of trees, 2—157	Acres and number of trees, ½—168	Acres and number of trees, 2—192	Area and number of trees, ½—96	Acres and number of trees, 2—244	Acres and number of trees, ½—100
	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.	Increase, inches.
1884-85 ...	·83	·42	·61	·34	...	...	...	...	·78	·37	...	...	...	...	..	...	...	...	...	...
1885-86 ...	1·08	·45	·71	·41	...	...	...	...	·98	·35	...	...	...	...	...	...	...	...	...	...
1886-87 ...	·68	·28	·43	·28	...	...	...	...	·54	·38	...	...	...	...	...	...	...	...	...	..
1887-88 ...	·91	·61	·84	·61	...	·47	...	·24	·90	·20	·90	·40	·80	·50	·60	·50	...	...	...	...
1888-89 ...	·85	·67	·81	·35	...	*·05	...	* 02	1·03	·67	1·15	·72	1 33	·52	·90	·50	...	...	...	...
1889-90 ...	·94	·23	·71	·33	...	·61	...	·23	·54	·18	1·07	·79	1·24	·74	·78	·29	·59	·47	·59	·29
1890-91 ...	·55	·13	·49	·14	...	·19	...	·10	·73	·41	·96	·35	1·20	·60	·97	·54	·50	·59	·62	·25
Average increase in the various plots per tree.	·83	·40	·65	·35	...	·31	...	·14	·78	·36	1 02	·56	1·14	·59	·81	·45	·54	·53	·60	·27

NAINI TAL:
The 30th June 1891.

* Decreases.

S. EARDLEY-WILMOT,
Offg Conservator of Forests, Central Circle.

Appendix D.

FOREST DEPARTMENT. NORTH-WESTERN PROVINCES AND OUDH, CENTRAL CIRCLE

PRODUCE REMOVED BY FREE GRANTEES AND RIGHT-HOLDERS, 1890-91.

Name of grantee	Description of produce.	Naini Tal Division		Kumaun Division.		Garhwál Division.		Ganges Division.		Jhánsi Division.		Lalitpur Division.		Banda Division.		Total of each class of produce.	
		Amount	Value	Amount.	Value	Amount.	Value.	Amount.	Value.	Amount	Value	Amount	Value	Amount	Value.	Amount.	Value
		C ft.	Rs	C ft.	Rs	C ft	Rs	C ft.	Rs	C. ft	Rs.	C. ft.	Rs	C. ft.	Rs.	C ft	Rs.
Right-holders.	I.—Timber	1,12,628	13,949	34,394	10,915	9,087	2,807	4,745	2,445	850	102	584	70	...	..	162,288	30,258
	II —Firewood	17,250	719	8,35,666	8,500	3,78,855	3,946	1,28,055	1,334	...	...	...	...	...	..	13,53,826	14,499
	III.—Minor forest produce, such as bamboos, bark, fruit and limestone	...	271	...	10,000	...	5,000	...	797	...	...	...	...	...	...	...	16,068
	IV.—Grass, grazing and leaf fodder	...	6,462	...	11,000	...	10,000	...	3,108	...	...	...	...	...	...	...	30,570
	V —Branches. leaves and vegetable mould for manure.	...	81	...	...	...	...	...	...	...	...	...	...	...	...	...	81
	Total ..	1,29,878	21,482	8,70,060	40,415	3,87,942	21,753	1,32,800	7,684	850	102	584	70	.	.	15,22,114	91,506
Concessions by grant of Local Government.	I.—Timber	...	...	5,538	4,951	...	...	...	...	...	...	...	...	.	...	5,538	4,951
	II.—Firewood ...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	.	...
	III — Minor forest produce, such as bamboos. bark, fruit and limestone	...	...	6,560	410	...	...	...	...	...	...	...	...	...	...	6,560	410
	IV.—Grass, grazing and leaf fodder ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	V.—Branches, leaves and vegetable mould for manure.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	...	...	12,098	5,361	...	...	...	.	...	...		...	..	...	12,098	5,361
Free grants under Executive orders.	I.—Timber	8,384	909	4,610	2,747	5,565	1,789	24,109	3,246	...	...	225	28	...	...	42,893	8,719
	II.—Firewood	...	...	...	...	...	...	...	..	...	...	200	10	...	...	200	10
	III.—Minor forest produce, such as bamboos, bark, fruit and limestone	...	...	...	66	...	17	...	2	...	...	...	3	...	...	...	88
	IV —Grass, grazing and leaf fodder ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	V.—Branches, leaves and vegetable mould for manure	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	8,384	909	4,610	2,813	5,565	1,806	24,109	3,248	...	...	425	41		...	43,093	8,817
	GRAND TOTAL	1,38,262	22,391	8,95,768	48,589	3,93,507	23,559	1,56,909	10,932	850	102	1,009	111	...	.	15,77,305	1,05,684

ABSTRACT FOR THE CIRCLE.

Description of produce.	To right-holders.		Under concessions granted by Local Government.		By free grants under Executive orders		Total of each kind of produce.	
	Amount	Value.	Amount	Value	Amount.	Value	Amount.	Value
	C. ft	Rs.	C. ft.	Rs.	C. ft	Rs	C. ft.	Rs.
I.—Timber	1,62,288	30,288	5,538	4,951	42,893	8,719	2,10,719	43,958
II —Firewood	13,59,826	14,499	...	...	200	10	13 60,026	14,509
III.—Minor forest produce, such as bamboos, bark, fruit and limestone	...	16,068	6,560	410	...	88	6,560	16,566
IV.—Grass, grazing and leaf fodder	...	30,570	...	...	...	...	...	30,570
V.—Branches, leaves and vegetable mould for manure		81	...	...	...	...	...	81
GRAND TOTAL ...	15,22,114	91,506	12,098	5,361	43,093	8,817	15,77,305	1,05,684

NAINI TAL:
The 30th June 1891.

S. EARDLEY-WILMOT,
Offg. Conservator of Forests, Central Circle.

Appendix E.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, CENTRAL CIRCLE.

STATEMENT SHOWING YIELD OF BAMBOOS FOR THE EIGHT YEARS 1883-84 TO 1890-91.

Division.	1883-84.		1884 85		1885-86.		1886-87.		1887 88		1888-89		1889-90.		1890-91.		Total.	
	Scores.	Value	Scores.	Value.	Scores	Value	Scores.	Value.	Scores	Value.	Scores	Value	Scores.	Value	Scores.	Value	Scores	Value.
		Rs.		Rs		Rs		Rs.		Rs		Rs		Rs		Rs		Rs.
Naini Tal	...	...	...	...	...	..	...	...	...	...	...	.	288	75	1,349	133	1,637	208
Kumaun	212,949	15,244	193,543	17,520	94,099	8,872	102,740	9,490	85,936	8,081	60,869	5,988	44,396	4,688	102,626	8,461	897,158	78,344
Garhwál	375,432	27,252	202,832	17,197	232,148	22,225	255,866	25,173	185,487	18,396	155,714	15,116	143,006	14,507	165,623	19,330	1,716,108	1,59,196
Ganges	471,465	36,862	374,165	28,399	419,903	40,306	654,286	61,550	620,159	61,085	541,924	61,437	512,878	67,412	528,412	79,106	4,123,192	4,36,157
Thánsi	458	96	1,004	232	1,090	275	1,960	638	905	415	2,079	837	3,730	1,293	4,386	1,138	15,612	4,924
Lalitpur	56,937	4,448	39,606	3,459	42,150	4,212	40,308	4,881	36,031	4,397	27,564	3,414	48,341	5,241	20,966	2,504	311,903	32,556
Bánda	1,640	373	1,804	462	2,115	376	3,555	711	2,938	541	6,703	876	5,301	830	1,265	228	25,321	4,397
Total ...	1,118,881	84,275	812,954	67,269	791,505	76,266	1,058,715	1,02,443	931,456	92,915	794,853	87,668	757,940	94,046	824,627	1,10,900	7,090,931	7,15,782
Average rate per 100 score ...	Rs 7 39		Rs 8·09		Rs 9·02		Rs. 9 67		Rs 9·97		Rs. 11 03		Rs. 12 40		Rs 13 44		Rs. 10·09	

NAINI TAL:
The 30th June 1891.

S HARDLEY WILMOT,
Offg. Conservator of Forests, Central Circle.

APPENDIX F.

Forest Department, North-Western Provinces and Oudh, Central Circle.

Results of the fire conservancy operations, 1891.

The past season was, owing to an abnormally wet winter and spring, favourable to fire conservancy, although the lateness of the summer rains caused much anxiety in the plains forests and some loss in the more inflammable forests in the hills. Operations were further extended over 44,871 acres, the percentage of failure fell from 6 11 to 2·53, whilst the cost per acre protected and attempted shows a slight increase owing to prolongation of operations for three weeks after the usual date. In the following statement revision of area calculations in Jhánsi has necessitated alteration of figures given last year, so as to make comparison with this season's statistics valid :—

Year of fire season.	Area in which protection was attempted			Failures.	Area actually protected.	Cost of the operations of the year.	Cost.		Percentage of the area attempted to total area of the forest.	Percentage of failure to the total area attempted.
	(i) By means of a regular system of fire lines and watchers.	(ii) By the ordinary establishment under administrative orders and with the aid of the villagers or trifling expenditure on watchers, &c.	Total of (i) and (ii) as per Form No. 51				Per acre attempted.	Per acre protected.		
	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Pies.	Pies.		
1890 (i) ...	464,118	.	...	24,580	439,538	18,797	7 77	8 21	43 78	5 29
1890 (ii) .	...	50,079	...	6,838	43,241		...	...	4 72	13·65
Total ...	464,118	50,079	514,197	31,418	482,779	18,797	7·01	7 47	48 51	6·11
1891 (i) ...	502,855	...	...	4,885	497,970	21,376	8·16	8 24	46 44	0 97
1891 (ii) ...	...	56,213	...	9,286	46,927	...	...	...	5 19	16 51
Total ...	502,855	56,213	559,068	14,171	544,897	21,376	7 34	7 53	51 63	2 53

2. The statement below gives comparative figures for the last two years by divisions :—

Division.	Area attempted.				Area protected.		Failures				Cost.		Cost per acre attempted in pies.	
	Acres.		Percentage of total area of divisions.				Acres.		Percentage of area attempted					
	1891	1890	1891	1890	1891.	1890	1891.	1890.	1891.	1890	1891.	1890.	1891	1890.
											Rs.	Rs		
Naini Tal ...	90,228	70,118	90 05	82 51	86,926	67,545	3,302	2,573	3 65	3 67	1,489	1,300	3 06	3 57
Kumaun ..	129,326	120,806	43 31	40 05	127,903	115,071	1,423	5,735	1 10	4 74	5,463	4,128	8 11	6 56
Garhwál ...	181,709	181,709	57 80	59 04	181,379	178,051	330	3,658	0·18	2 01	9,372	9,281	9 90	9 20
Gangá ...	101,300	89,716	39 40	34·82	101,300	77,102	...	12,614	...	14 06	4,589	3,684	8 09	7 88
Jhánsi[79] ..	30,602	25,945	100 00	100·00	29,445	25,934	1,157	11	3 77	0 04	413	298	2 59	2 20
Lalitpur ...	25,903	25,903	28 09	28·09	17,944	19,076	7,959	6,827	30 72	26 39	100	100	0 74	0 74
Total ...	559,068	514,197	51·63	48 51	544,897	482,779	14,171	31,418	2·53	6 11	21,376	18,797	7 34	7 01

There is a saving in Naini Tal consequent on extension of operations without proportionate rise in cost, in Lalitpur the cost is the same as in 1890, whilst in the other divisions slight increases occur, referable, as abovementioned, to a deferred monsoon

3 The details of failures by divisions is given below :—

Naini Tal Division.—There were eight fires over 3,302 acres Of these the cause of three fires which burnt over 27 acres was not discovered, two fires over 21 acres were caused by carelessness and the offenders were punished, 200 acres were burnt over by a fire which crossed from the outer forests, and the balance of the area unsuccessfully protected consisted of forests in Airadeo, where the tenantry, not being yet accustomed to fire conservancy, continued the usual pernicious custom of firing the forest to obtain new grass. The results in Naini Tal Division are thus satisfactory There was an increase of 20,110 acres to the area under protection.

Kumaun Division.—There were 10 fires over 1,423 acres. Of these the cause of seven fires burning 1,305 acres could not be proved, although it is considered from enquiry made at the time that they were mostly caused by carelessness of passers by or intentionally by native sportsmen in pursuit of game In two fires over an area of 71 acres the stupidity and disobedience of forest guards is to blame, whilst only one fire of 47 acres crossed the fire lines from the outer forests The area added to the specially protected forests in this division amounted to 8,520 acres, and great credit is due to the Divisional Officer, who has during the past two years worked so successfully in the protection of new areas

Garhwál Division.—There were two fires over 330 acres. Of these one fire over 270 acres was caused by an accident when burning ridge fire lines, and the other, although no proof was forthcoming, was supposed to have been lighted by a native sportsman as it suddenly broke out in the centre of a closed block. The results of fire conservancy in this division are excellent The area attempted is the same as last year.

Ganges Division.—There were no failures. 11,584 acres were added to the specially protected area

Jhánsi Division.—There were five fires over 1,157 acres Of these 1 fire of 10 acres crossed from the native state of Orcha, one fire of 225 acres was caused by soldiers smoking, two fires aggregating 422 were caused by sparks from locomotives, and the cause of one fire over 500 acres was unknown The area attempted was increased by 4,657 acres

Lalitpur Division.—There were 11 fires over 7,959 acres Of these one fire of 720 acres was caused by a villager who suffered one month's imprisonment on conviction, two fires aggregating 1,640 acres were caused by sparks from locomotives, whilst 3,417 acres were burnt by four fires crossing from the Saugor district, and four fires crossing from zamindari forests passed over 2,182 acres In Lalitpur there was no change in area attempted to be protected

Banda Division.—There were no fires

4 The following statement gives an abstract of the above information in the usual form —

Year	By the forest establishment when burning fire lines		Fires which entered the forest by crossing exterior fire lines		By workmen (not in forest employ) by accident		By villagers, travellers or soldiers by accident		Fires caused by lighting or fire balloons		Maliciously lighted inside the forests		Cause unknown		Total	
	No	Area in acres	No	Area in acres	No	Area in acres	No	Area in acres	No	Area in acres	No	Area in acres	No	Area in acres	No	Area in acres
1891	3	341	11	5,856	4	2 062	5	1,026			2	3 054	11	1 832	36	14,171
1890	5	84	12	11,075	1	12,502	9	1,837	1	2,968	1	669	10	2 289	1[illegible]	31 418
1889 .	2	980	5	740			7	787			1	14	5	70	20	2 597
1888	5	613	1	965	3	363	3	239	3	658	7	1 950	9	959	31	7 147
1887 .	3	284	8	6,768	5	80	47	7,717	1	10	4	7,707	7	3[illegible]	70	22 964

5. Divisional Officers all speak well of the energy and zeal of the subordinate staff, on whom the constant increase of the area under fire protection entails much exposure and hard work at a trying time of the year.

DATED NAINI TAL: *The 20th July* 1891.

S. EARDLEY-WILMOT,
Offg. Conservator of Forests, Central Circle.

Form No. 49.

FOREST DEPARTMENT, N W. PROVINCES AND OUDH, CENTRAL CIRCLE.

AREA OF RESERVED FORESTS, 1890-91.

Division.	Range.	Civil district or territory	Name of forest	Area on 1st April 1890. Acres.	Area on 1st April 1890. Equivalent in square miles	Added during the year Acres.	Excluded or transferred to other heads Acres.	Area on 31st March 1891 Acres.	Area on 31st March 1891 Equivalent in square miles.	Number and date of notification of addition or transfer.	Remarks
Naini Tal ...	China ..		Naini Tal reserve ... Kota ... Fatehpur, Dechauri,	15,567	24	*3	...	15,570	24	* G O No. 120F/105-18, dated 22nd February 1891.	
	Hinnan .		Ditto Gagar, Ninglat ...	23,680	37	...	(a) 11,827	11,853	19		(a) Revision of area. Acres. Excluded .. 11,827 Added ... 3 Balance less ... 11,824
	Ranikhet ..		Ranikhet reserve	4,934	8		...	4,934	8		
			Total ...	44,181	69	3	11,827	32,357	51		
Kumaun ...	Dechauri ..	Kumaun .	I —Dabka	7,141	11	...	(b) 7,141	...	...		(b) Transferred to Garhwal Division under sanction of G O. No 15 F/255—15, dated 8th March 1890. Acres. Added ... Nil. Excluded ... 7,141
	Fatehpur ... Chakhata		II —Dechauri	17,754	28	...	..	17,754	28		
			III —Fatehpur	29,002	45	...	...	29,002	45		
			IV —Chakhata	59,884	93	...	...	59,884	93		
			V —Horai	4,400	7	...	...	4,400	7		
	Chaubhainsi..		VI —Chaubhainsi ...	1,32,233	207	...	...	1,32,233	207		
			VII —Jaunla Sal	42,708	67	...	...	42,708	67		
	Kalonia ..		VIII —Kalonia	4,286	7	...	...	4,286	7		
	Sarda ..		IX —China .	4,387	7	...	...	4,387	7		
	..		X —Sarda Islands .	3,491	5	...	...	3,491	5		
	...		XI —Chandani	403	1	..	...	403	1		
			Total ...	3,05,689	478	...	7,141	2,98,548	467		
Garhwal ..	Patli Dún .	Garhwál	Reserve No 1 —Kotri Dún, block Kalagarh	38,996	61	...	(c) 19,609	19,387	30		(c) Transferred to Ganges Division under sanction of Government order above quoted.
			Reserve No 2.—Patli Dún ..	1,33,558	209	...	...	1,33,558	209		
			Do 3.—Kartia ...	847	1	...	...	847	1		
	Chilkia and Kota.	Kumaun ...	Do 4 —Chilkia ...	82,685	129	..	...	82,685	129		
			Do 5.—Kota ...	43,022	67	.	...	43,022	67		
			Do 6 —Dabka .	.	.	(d) 7,141	...	7,141	11		(d) Transferred from Kumaun Division. Acres Added ... 7,141 Excluded ... 19,609 Balance less ... 12,468
	Dhara ...	Bijnor ..	Do 7 —Garhibulchand,	11,098	17	...	...	11,098	17		
			Do 8.—Rehar ...	16,619	26	...	...	16,619	26		
			Total ...	3,28,825	511	7,141	19,609	3,14,357	491		

FOREST DEPARTMENT, CENTRAL CIRCLE, NORTH WESTERN PROVINCES AND OUDH

Form No. 49.

AREA OF RESERVED FORESTS, 1890-91—(*concluded*)

Division.	Range.	Civil district or territory	Name of forest	Area on 1st April 1890		Added during the year	Excluded or transferred to other heads	Area on 31st March 1891		Number and date of notification of addition or transfer	Remarks.
				Acres	Equivalent in square miles	Acres	Acres.	Acres	Equivalent in square miles		
Ganges	Kohtri Dun	Garhwal	I—Palain	..		(a) 19,609	.	19,609	31		(a) Transferred from Garhwal Division, *vide* entry under Garhwal Division
	Udepur	Garhwal	II—Kohtri, Sona Nadi	92,975	145		..	92,975	145		
			III—Udepur	34,515	54	...	(b) 2,300	32,215	50		(b) G O No. $\frac{16\ F}{214A\ 9}$, dated 25th February 1891
	Gohri	Garhwal and Bijnor	IV—Gohri, Chandi	96,757	151	..	...	96,757	151		
	Lansdowne	Garhwal	V—Lansdowne			(c) 15,507	...	15,507	24		(c) G O No $\frac{50\ F}{41A\ 43}$, dated 14th November 1890
			Total	224,247	350	35,116	2,300	257,063	401		Acres. Added ... 35,116 Excluded 2,300 Balance more 32,816
Jhánsi	Jhansi	Jhansi	Jhánsi	10,555	17	(a)*4,657		15,212	24	(a)*6,409 acres added on account of grass runds diminished by 1,752 acres in revision of forests generally Net increase =4,657 acres	(a) Notification No $\frac{708\ F}{9A\ 2}$, dated 30th September 1890
			Mau	6,011	9	914	(b)	6,925	11		
			Garotha	5,127	8	1,386		6,513	10		
			Moth	2,250	3		(c) 278	1,952	3		(b) (c) Revision of area. Acres. Added ... 6,957 Excluded . 278 Balance more 6,679
			Total	23,923	37	6,957	278	30,602	48		
Lalitpur	Lalitpur	Lalitpur	Lalitpur	290	...	..	..	290	..		(a) North Western Provinces and Oudh, Notification No $\frac{695\ F}{1^{2}4A\ 5}$, dated 22nd September 1890
			Bansi	4,667	7	7	.	4,667	7		
			Talbehat	9,290	15	(a) 45	..	9,335	15		
			Balabehat	30,173	47	..	..	30,173	47		
			Banpur	4,745	7	...	..	4,745	7		
			Marori	1,283	2			1,283	2		
			Maraura	39,415	62	..		39,415	62		
			Total	89,863	140	45	.	89,908	140		Acres Added during the year 49,262 Excluded ... 41,155
			Total	1,014,728	1,586	49,262	41,155	1,022,835	1,598		Balance more ... 8,107

NAINI TAL
The 30th June 1891

S EARDLEY WILMOT,
Offg Conservator of Forests, Central Circle.

Form No. 49.

FOREST DEPARTMENT, N.-W PROVINCES AND OUDH, CENTRAL CIRCLE.

AREA OF PROTECTED FORESTS, 1890-91.

Division.	Range.	Civil district or territory	Name of forest.	Area on 1st April 1890.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1891		Number and date of notification of addition or transfer.	Remarks.
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.		
Naini Tal Division.	China ...	Kumaun ...	China								
			Budlakot								
			Nalena								
Naini Tal Sub-Division.	Hinnan ...		Bhawali	19,445	30	...	(a) 3	19,442	30		(a) Transferred to the Brewery. G. O. No. $\frac{962}{XXIII-65}$, dated 23rd February 1891.
			Jakh								
			Laria Kanta								
			Kuria								
			Naini Tal Sub-division ...	19,445	30	...	3	19,442	30		
Ránikhet Sub-Division.	Siuni ...		Machor	146	...	...	...	146	...		
			Bhatronj	5,828	9	...	...	5,828	9		
			Siuni	4,432	7	...	...	4,432	7		
			Siun	700	1	...	...	700	1		
			Belekh	942	1	...	...	942	1		
	Ránikhet ...		Kathallekh	1,812	3	...	...	1,812	3		
			Ganiadeoli	889	1	...	...	889	1		
			Karchuli	213	...	...	...	213	...		
			Chillianao	630	1	...	...	630	1		
			Chaubattia	1,208	2	...	...	1,208	2		
			Padholi	957	2	...	...	957	2		
			Dwarson	1,519	2	...	...	1,519	2		
			Deolikhet	20	...	...	...	20	...		
			Siahi Devi	2,064	3	...	...	2,064	3		
	Aira Deo ...		Aira Deo	..	...	(b) 16,757	...	16,757	26	(b) Notification No. $\frac{156F}{667-71}$, dated 25th February 1891.	
			Total ...	21,360	33	16,757	...	38,117	59		
			Total, Naini Tal Division ...	40,805	64	16,757	3	57,559	90		
Lalitpur ...	Lalitpur ...	Lalitpur ..	Talbehat	2,362	4	...	...	2,362	4		
			Total ...	43,167	67	16,757	3	59,921	94		

NAINI TAL:
The 30th June 1891

S. EARDLEY-WILMOT,
Offg. Conservator of Forests, Central Circle.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, CENTRAL CIRCLE.

Form No. 49.

AREA OF BÁNDA FORESTS, 1890-91—(UNCLASSED STATE FORESTS).

Division.	Range.	Civil district or territory.	Name of forest.	Area on 1st April 1890.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1891.		Number and date of notification of addition or transfer.	Remarks.
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.		
			I.—Ranipur-Kalianpur.								
Bánda ...	...	Bánda ...	1. Mau	385·53	...	...	...	385·53	...		
			2. Unchadih	413 88	...	...	...	413 88	...		
			3. Sakrawan	644·80	...	...	...	644 80	...		
			4. Ránipur-Kalianpur ...	2,697 84	...	...	...	2,697 84	...		
			5. Mamaniya or Katanta ...	2,250 24	...	...	...	2,250 24	...		
			6. Gadurha	221 66	...	...	...	221·66	...		
			7. Uldan	714·02	...	...	...	714·02	...		
			8. Rajuhan	4,618 80	...	...	...	4,618·80	...		
			9. Deori	4,273 31	...	...	...	4,273·31	...		
			*10. Nihi	2,109·61	...	...	...	2,109·61	...		
			*11. Maholi	948·76	...	...	...	948·76	...		
			*12. Kalianpur	2,670·66	...	...	...	2,670 66	...		
			Total ...	21,949 11	34	...	...	21,949·11	34		
			II.—Chauri-Donda.								
Ditto ...	...	Ditto ...	*13. Karauhan	728 43	...	...	...	728 43	...		
			*14. Sikapur-Chit Ghati ...	69·43	...	...	...	69 43	...		
			15. Jaro or Jaro muáfi ...	1,139 94	...	...	...	1,139 94	...		
			16. Chauri	4,036 70	...	...	...	4,036·70	...		
			17. Chulha	1,502 38	...	...	...	1,502 38	...		
			18. Parasin or Kulmar-Parasin ...	3,623 30	...	...	...	3,623 30	...		
			19. Donda	5,416·14	...	...	...	5,416 14	...		
			Total ...	16,516·32	26	...	...	16,516·32	26		
			III.—Manickpur.								
Ditto ...	...	Ditto ...	20. Chulhi	1,621·92	...	...	...	1,621·92	...		
			*21. Mahál Bal Kishn of Chulhi village.	26 25	...	...	...	26 25	...		
			*22. Mahál Mukhramgir of Chulhi village.	13·00	...	...	...	13·00	...		
			23. Ambha	2,242 77	...	...	...	2,242·77	...		
			24. Karkpadri or Pandria ...	730 93	...	...	...	730 93	...		
			25. Chheria Kalan ...	1,237 83	...	...	...	1,237·83	...		
			26. Amcher Narwa ...	4,216 66	...	...	...	4,216·66	...		
			27. Rukma Khurd ...	132 62	...	...	...	132 62	...		
			28. Area outside forest line ...	716·00	...	...	...	716·00	...		
			Total ...	10,937·98	17	...	...	10,937·98	17		

Form No. 50.

FOREST DEPARTMENT, N W PROVINCES AND OUDH, CENTRAL CIRCLE.

REGISTER OF BREACHES OF FOREST RULES DURING 1890-91.

Forest Division.	Cases pending from 1889-90.	New cases of the year.					Total cases.	Disposed of during the year.						Cases pending at close of year	Remarks
		Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission, or in tracts in which grazing is prohibited.	Other offences	Total new cases of the year.		Convictions.		Acquittals.		Total.			
								Cases.	Persons	Cases.	Persons.	Cases.	Persons		
I.—Prosecutions in Courts of Law.															
Naini Tal Division.															
By the Assistant Commissioner of Naini Tal.															
Naini Tal	1	...	...	...	...	...	1	1	3	...	...	1	3	...	
Bánikhet	1	1	1	..	...	2	3	3	40	...	...	3	40	...	
By the Sadar Amín of Almora.															
Bánikhet	...	...	1	...	...	1	1	1	7	...	2	1	9	...	
By the Cantonment Magistrate of Bánikhett, and Senior Assistant Commissioner, Kumaun.															
Bánikhet	...	...	7	.	...	7	7	...	...	...	...	.		7	7 persons
Total, Naini Tal Division ...	2	1	9	...	...	10	12	5	50	...	2	5	52	7	7 persons
Kumaun Division	...	...	...	...	...	*Nil.*		...	...	...	...	..	...	...	
By the Magistrate of Garhwál.															
Garhwál Division	...	...	...	...	1	1	1	1	8	...	...	1	8	...	
By the Magistrate, Kumaun Bhábar.															
.	3	...	...	...	...	...	3	...	...	3	9	3	9	...	
By the Magistrate of Bijnor.															
	...	...	1	...	1	2	2	1	1	1	1	2	2	...	
Total, Garhwál Division ...	3	...	1	...	2	3	6	2	9	4	10	6	19	...	

Ganges Division								*Nil.*							
Jhánsi Division								*Nil.*							
Lalitpur Division	...	...	3	...	1	4	4	4	4	...	...	4	4	...	
Bánda Division	...	...	39	...	...	39	39	37	46	2	2	39	48	...	
Total, I ...	5	1	52	...	3	56	61	48	109	6	14	54	123	7	7
Naini Tal Division.					II.—Cases compounded under section 67 of the Forest Act.										
Naini Tal	...	7	265	1	...	273	273	255	350	18	27	273	377	...	
Ranikhet	...	8	93	1	.	102	102	92	231	10	32	102	263	...	
Total, Naini Tal ...	...	15	358	2	...	375	375	347	581	28	59	375	640	...	
Kumaun Division	...	3	118	...	7	128	128	128	145	...	...	128	145	...	
Garhwál Division	...	1	37	...	3	41	41	41	58	...	...	41	58	...	
Ganges Division	5	...	32	...	42	74	79	61	112	...	...	61	112	18	22
Jhánsi Division							*Nil.*								
Lalitpur Division							*Nil.*								
Bánda Division							*Nil.*								
Total, II ...	5	19	545	2	52	618	623	577	896	28	59	605	955	18	22
Total, I and II ...	10	20	597	2	55	674	684	625	1,005	34	73	659	1 078	25	29

NAINI TAL:
The 30th June 1891.

S EARDLEY-WILMOT,
Offg Conservator of Forests, Central Circle.

FOREST DEPARTMENT, CENTRAL CIRCLE, N.-W. PROVINCES AND OUDH [Form No. 51.

AREA OF FOREST TRACTS PROTECTED FROM FIRE DURING THE DRY SEASON, 1891,—TO ACCOMPANY REPORT FOR 1890-91.

Division.	Forest tracts.	Year in which protection commenced.	Area actually protected up to 30th June 1890.	During dry season of 1891. Area attempted to be protected	Failures.	Actually protected.	Cost during the season.	Remarks.
Naini Tal Division—			I.—Areas under Special Protection.				Rs.	
Naini Tal Sub Division	Naini Tal protected forest	1876	16,818	19,442	50	19,392	352	
	Naini Tal reserve forest	1886	15,547	15,570	...	15,570	203	
	Gagar Ninglat reserve	1888	10,978	11,853	240	11,613	179	
	Dolmar-Mora reserve	1891	..	3,660	...	3,660	72	
	Total	..	45,343	50,525	290	50,235	806	
Ránikhet Sub-Division	Ránikhet reserve	1874	4,909	4,934	5	4,929	152	
	Padholi protected forest	1882	957	957	...	957	19	
	Chaubattia "	1882	1,208	1,208	...	1,208	24	
	Karchuli "	1885	213	213	...	213	15	
	Ganiadeoli "	1878	889	889	...	889	46	
	Kathalekh "	1879	1,483	1,812	...	1,812	63	
	Sunni "	1880	4,152	4,432	...	4,432	116	
	Sun "	1885	640	700	...	700	24	
	Dwarson "	1888	1,514	1,519	.	1,519	15	
	Bellekh "	1888	942	942	..	942	15	
	Bhatronj "	1888	2,485	2,500	.	2,500	30	
	Chilliano "	1884	594	630	7	623	24	
	Airadeo "	1891		16 757	3,000	13,757	90	
	Total	..	19,992	37,493	3,012	34,481	633	
	Total, I		65,335	88,018	3,302	84,716	1,439	
			II.—Areas protected by the Ordinary Establishment					
Ránikhet Sub-Division.	Machor protected forest	1888	146	146	...	146	...	
	Siahi Devi "	1888	2,064	2,064	...	2,064	...	
	Total, II	.	2,210	2,210	..	2,210	.	
	Total, Naini Tal Division	.	67,545	90,228	3,302	86,926	1,439	

				I.—Areas under Special Protection.					
Kumaun Division,	*Deckauri Range.*								
	Sanani block	1890	1,519	3,036	...	3,036	355		
	Kalianpur block	1891	...	2,710	133	2,577			
	Dhamola block	1891	...	1,310	...	1,310			
	Fatehpur Range								
	Bhakra block	1888	2,891	2,891	...	2,891	195		
	Mona „ ...	1890	4,042	4,126	...	4,126			
	Chakhata Range.								
	Horai ...	1876	4,476	4,290	...	4,290	839		
	Lakhman Mandi	1883	2,049	2,049	...	2,049			
	Jampokhra	1890	1,109	3,009	...	3,009			
	Patrani ...	1890	2,730	2,730	...	2,730			
	Asni ...	1890	2,415	2,415	...	2,415			
	Chaubhainsi Range.								
	(i) Nindhaur Beat—								
	Nindhaur	1882	22,390	25,305	...	25,305	2,205		
	Karakot	1890	3,444	3,444	...	3,444			
	(ii) Jaula Sál Beat—								
	Jaula sál	1876	7,390	7,592	64	7,528			
	Chungad	1890	5,313	5,313	...	5,313			
	Hatgad	1890	3,838	3,858	47	3,811			
	Chamuadhunga	1890	4,935	4,935	...	4,935			
	Kalonia Range.								
	Sarra valley ...	1889	7,262	8,277	...	8,277	1,324		
	Dulagad ...	1887	5,301	5,301	...	5,301			
	Birgot ...	1890	4,515	4,515	...	4,515			
	Bhargot ...	1890	6,090	6,090	...	6,090			
	Laibar ...	1890	8,683	8,683	...	8,683			
	Kumia ...	1890	5,796	5,796	...	5,796			
	Sudlimat ...	1890	4,305	4,3,05	977	3,328			
	Sarda Range								
	Solani ...	1876	403	403	...	403	545		
	Gulsapani ...	1891	...	1,000	22	978			
	Kakrali ...	1891	..	771	...	771			
	Dangaona ...	1890	797	825	...	825			
	Naghan ...	1890	117	686	..	686			
	Bansa ...	1890	803	803	...	803			
	Khapkot ...	1890	433	433	...	433			
	Khamari ...	1890	610	610	...	610			
	Total, I ...	...	113,156	127,011	1,243	125,768	5,463		
				II.—Areas protected by the Ordinary Establishment					
	Jariakhal, North ...	1890	815	1,215	180	1,035	...		
	„ South ...	1890	1,100	1,100	...	1,100	...		
	Total, II ...	...	1,915	2,315	180	2,135	..		
	Total, Kumaun Division ...	...	115,071	129,326	1,423	127,903	5,463		

FOREST DEPARTMENT, CENTRAL CIRCLE, N.-W. PROVINCES AND OUDH. [Form No. 51.

AREA OF FOREST TRACTS PROTECTED FROM FIRE DURING THE DRY SEASON, 1891,—TO ACCOMPANY REPORT FOR 1890-91.

Division.	Forest tracts.	Year in which protection commenced.	Area actually protected up to 30th June 1890.	During dry season of 1891.			Cost during the season	Remarks.
				Area attempted to be protected	Failures	Actually protected.		
							Rs.	
Garhwál Division,	North Patli Dún (part of Patli Dún forest block No. II) ...	1878	45,692	45,692	...	45,692	2,016	
	South Patli Dún (ditto ditto)	1873	24,588	24,588	...	24,588	2,293	
	Garhibulchand (part of forest block No. VII)	1877	6,020	8,996	...	8,996	754	
	Rehar (part of Rehar forest block No VIII)	1881	10,862	11,531	...	11,531	1,035	
	Chilkia (part of Chilkia forest block No. IV)	1872	50,599	50,620	...	50,620	1,924	
	Kotah (part of Kotah forest block No V)	1877	36,178	36,178	270	35,908	1,242	
	Kailkhur (part of Dabka forest block No. VI)	1888	4,104	4,104	60	4,044	108	
	Total, Garhwál Division ...	...	178,051	181,709	330	181,379	9,372	
	Gori Range.							
Ganges Division,	Kunaun	1887	8,131	8,131	...	8,131	1,000	
	Kauria Chaur	1881	2,169	2,169	...	2,169		
	Andher Majhera		1,410	1,410	...	1,410		
	Dogadda		4,172	5,004	...	5,004		
	Jogi Chaur		6,923	6,923	...	6,923		
	Mundhal		2,174	3,629	...	3,629		
	Udeypur Range.							
	Rawasan and Luni	1890	3,254	3,254	...	3,254	437	
	Gwalgarh and Malan	1887	5,064	5,064	...	5,064		
	Sukrao	1882	1,112	1,112	...	1,112		
	Kohtri Range.							
	Dabina	1886	10,970	11,082	...	11,082	1,267	
	South Kohtri	1889	3,596	3,596	...	3,596		
	North Kohtri	1890	8,100	8,100	...	8,100		
	Nauri	1891	...	1,369	...	1,369		
	Cheula	1891	...	504	...	504		
	Sona Nadi Range.							
	Shishamkhata	1877	1,847	1,847	...	1,847	792	
	North Sona Nadi	1889	4,064	12,920	...	12,920		

	Palain Range.							
	Mandalti	1888	14,096	8,715	...	8,715	1,093
	Kansur			8,829	...	8,829	
	Tumaria			4,071	...	4,071	
	Kugad	1891	...	3,571	...	3,571	
	Total, Ganges Division ...	...	77,102	101,300	..	101,300	4,589
	I.—Areas under Special Protection, Jhansi pargana.						
	Dhukwan and Sukhwan blocks	1,874	1,483	2,239	...	2,239	413
	Bajna block	1,888	457	539	10	529	
	Total, I ...	..	1,940	2,778	10	2,768	413
Jhánsi Division...	**II.—Areas protected by the Ordinary Establishment with the aid of villagers, Jhansi pargana.**						
	Remaining forest blocks	1888	8,604	12,434	1,147	11,287	...
	Mau pargana forests	...	6,925	6,925	...	6,925	...
	Garotha ditto	...	6,513	6,513	...	6,513	...
	Moth ditto	...	1,952	1,952	...	1,952	.
	Total, II ...	...	23,994	27,824	1,147	26,677	
	Total, Jhánsi Division ...	...	25,934	30,602	1,157	29,445	413
	I.—Areas under Special Protection, Lalitpur pargana.						
	Kachnoda forests	1888	190	190	...	190	100
	Sairwas	...	100	100	...	100	
	Balabehat pargana.						
	Deogarh	1875	998	998	...	998	
	Garauli		751	751	...	751	
	Total, I ...	.	2,039	2,039	..	2,039	100
Lalitpur Division,	**II.—Areas protected from fire by the Ordinary Establishment.**						
	Talbehat forests	1888	17,037	11,652	7,959	15,905	...
	Bansi "	...		4,667			
	Banpur "	...		4,745			
	Balabehat Forests. The balance after deducting walled portion of Deogarh, after allowing for 41 acres burnt in clearing fire line outside wall.	...		2,800			
	Total, II ...	...	17,037	23,864	7,959	15,905	...
	Total, Lalitpur Division ...	...	19,076	25,903	7,959	17,944	100
	Total, I Forests ...	...	437,623	502,855	4,885	497,970	21,376
	Total, II Forests ..	...	45,156	56,213	9,286	46,927	...
	GRAND TOTAL FOR THE CIRCLE .	...	482,779	559,068	14,171	544,897	21,376

NAINI TAL:
Dated the 20th July 1891.

S. EARDLEY-WILMOT,
Offg. Conservator of Forests, Central Circle.

Form No. 52.

FOREST DEPARTMENT, CENTRAL CIRCLE, NORTH-WESTERN PROVINCES AND OUDH.

AREA OF PLANTATIONS, 1890-91.

Division.	Name of plantation.	Area in acres. On 1st April 1891.	Area in acres. Added during the year.	Area in acres. Excluded during the year	Area in acres. Area on 31st March 1891.	Receipts. Of the year.	Charges. Of the year.	Remarks.
Nassi Tal.			**Regular plantations.**			Rs	Rs.	
Bánikhet Sub-Division ...	Bánikhet Nursery	50	...	...	50	693	1,341	
	Total ...	50	...	...	50	693	1,341	
			Cultural operations					
Naini Tal Sub-Division ...	Jabar	147	...	...	147	...	...	Of this area about 50 acres are stocked with coppice and natural seedlings.
	China	96	...	...	96	...	57	
	Kahla	39	...	...	39	...	28	
	Nairwari	43	...	...	43	...	...	Walnut and ash.
	Deopata	47	...	...	47	...	...	Deodár, walnut, ash, and kharsu.
	Kiladhunga	25	...	...	25	...	...	Deodár, walnut, and ash.
	Bhadli	33	...	...	33	...	...	Ash and banj
	Maulani	49	...	...	49	...	141	Ash and walnut fruit trees.
	Chatrani	5	...	...	5	...	5	Banj and chír.
	Various other plantations imperfectly stocked, incomplete, or success uncertain.	...	...	...	...	...	4	Area not known.
	Total, Naini Tal Sub-Division ...	484	...	...	484	...	235	
Bánikhet Sub-Division ...	Jakhdeo Upper							
	Ditto Lower							
	Garkhet							
	Jainoli	367	...	...	367	...	82	Area approximate.
	Dharmikhet							
	Ghingarukhal							
	Various other plantations imperfectly stocked, incomplete, or success uncertain.	...	...	...	...	...	14	
	Total, Bánikhet Sub-Division ...	367	..	...	367	...	96	
	Total, Naini Tai Division ..	851	...	...	851	...	331	

Kumaun	Haldwáni and Chorgalia ...	7	...	...	7	...	313	
Garhwál	Chopra plantation	35	5	...	40	...	32	
	Petty cultural operations at Rámnagar, Mohan, Rámpur, Leti.	...	...	...	...	...	146	
	Total, Garhwál Division ...	35	5	...	40	...	178	
Ganges	Chila	1½	..	...	1½	...	...	
	Haldukhata	¼	½	...	1	...	123	Mango groves in camping grounds.
	Saneh	3	...	...	3	...	155	
	Total, Ganges Division ...	5	½	..	5½	...	278	
Jhánsi	Sukwan Dhukwan	45	1	...	46	...	113	
	Ganupura	38	1	...	39	...	114	
	Bhasneo	...	...	...	...	...	...	
	Magarpur	...	...	...	...	...	...	
	Total, Jhánsi Division ...	83	2	...	85	...	227	
Lalitpur	Kachnoda	25	2	2	25	...	51	
	Deogarh	...	2	2	...			
	Dudhai	...	2	2	...			
	Sairwas	...	2	2	2			
	Hadda	2						
	Total, Lalitpur Division ...	27	8	8	27	...	51	
Bánda	Mamaniya	...	...	...	...	...	...	Teak.
	Kaluha	5	...	...	5	...	...	Shisham, mahwa, jaman.
	Total, Bánda Division ...	5	...	...	5	...	...	
	GRAND TOTAL, CULTURAL OPERATIONS ...	1,013	15	8	1,020	...	1,378	
	Add for Regular plantations...	50	...	...	50	693	1,341	
	Total ...	1,063	15	8	1,070	693	2,719	

NAINI TAL:
The 30th June 1891.

S. EARDLEY-WILMOT,
Offg. Conservator of Forests, Central Circle.

Form No. 54.

FOREST DEPARTMENT, CENTRAL CIRCLE, NORTH-WESTERN PROVINCES AND OUDH.

OUTTURN (IN CUBIC FEET, SOLID) OF TIMBER AND FUEL DURING THE YEAR 1890-91 AND AGENCY OF EXPLOITATION.

Division.	Timber in the rough; logs.					Timber in the rough; poles.					Sawn or squared timber.					Miscellaneous.					Fuel.					Total.
	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right holders.	Total.	Outturn.
Naini Tal.																										
											I.—Reserved Forests.															
Regeneration—																										
(a) Selection fellings ...	...	11 840	300	1,780	13,920	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15,190	98,444	...	...	113,634	127,554
Amelioration—																										
(d) Thinnings ...	...	...	...	...	...	...	2,722	1,360	3,012	7,094	...	...	...	...	...	...	...	...	...	...	1,866	...	...	...	1,866	8,960
Unclassed fellings—																										
Green	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15,395	21,880	...	...	37,275	37,275
Dry	...	17	...	...	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	53,979	40,006	...	...	93,985	94,002
Total ...	...	11,857	300	1,780	13,937	...	2,722	1,360	3,012	7,094	...	...	...	...	...	...	...	...	...	...	86,430	160,330	...	...	246,760	267,791
											II.—Protected Forests.															
Regeneration—																										
(a) Selection fellings ...	...	72,464	4,960	52,048	129,472	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	35,712	116,880	...	...	152,592	282,064
Amelioration—																										
(d) Thinnings ...	...	...	...	...	...	...	7,970	1,764	55,788	65,522	...	...	...	...	...	...	...	...	...	...	928	1,240	...	...	2,168	67,690
Unclassed fellings—																										
Green	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dry	...	40	...	...	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27,816	108,000	...	...	135,816	135,856
	...	72,504	4,960	52,048	129,512	...	7,970	1,764	55,788	65,522	...	...	...	...	...	...	...	...	...	...	64,456	226,120	...	...	290,576	485,610
Total ...	...	84,361	5,260	53,828	143,449	...	10,692	3,124	58,800	72,616	...	...	...	...	...	...	...	...	...	...	150,886	386,450	...	...	537,336	753,401

Kumaun.																										
												I.—Reserved Forests														
Regeneration—																										
(a) Selection fellings ...	...	13,268	133	...	13,401	...	...	...	...	...	.	49,775	6,162	...	55,937	...	...	..	...	...	...	...	...	...	...	69,338
Regeneration—																										
(b) Coppice with standard	...	...	...	...	...	...	...	...	...	...	...	47	...	...	47	...	...	...	...	...	...	13,970	...	...	13,970	14,017
Amelioration—																										
(c) Improvement fellings,	...	7,926	...	...	7,926	...	47,024	96	...	47,120	..	40,611	.	...	40,611	...	129	...	...	129	...	62,214	...	...	62,214	158,000
(d) Thinnings ..	..	1,292	...	...	1,292	...	...	56	...	56	..	..	191		191	...	...	...	.	...	...	...	..	...	...	1,539
Unclassed fellings—																										
Green	..	3,390	1,125	4,082	8,597	...	1,536	474	2,056	4,066		5,997	1,544	...	7,541	...	...	...	3,768	3,768	...	...	..	...	...	23,972
Dry	.	5,606	...	...	5,606	...	1,365	.	24,488	25,853		23,814	367	...	24,181	...	480	...	...	480	...	439,732	...	120,680	560,412	616,532
Total ...		31,482	1,258	4,082	36,822	...	49,925	626	26,544	77,095	..	120,244	8,264	..	128,508	...	609		3,768	4,377	...	515,916	...	120,680	636,596	883,398
Garhwál.												**I.—Reserved Forests.**														
Regeneration—																										
(a) Selection fellings ...	..	5,753	...	...	5,753	...	..	...	..	.		133,067	...	.	133,067	...	...	...	...	...	...	...	...	...	...	138,820
Regeneration—																										
Strip fellings ...	..	2,404	...	...	2,404	...	18,121	...	...	18,121	...	...	...		...	...	...	...	...	...	...	33,885	...	...	33,885	54,410
Amelioration—																										
(c) Improvement fellings,	.	75	...	...	75	..	...	...	...	...	..	6,403	...	.	6,403	...	...	..	...	...	...	...	...	...	...	6,478
Unclassed fellings—																										
Green	..	35	...	...	35	...	1,063	...	...	1,063	.	457	...		457	...	5,982	5,470	9,033	20,485	...	...	..	...	.	22,040
Dry		2,527	...	...	2,527	..	3,404	...	...	3,404	...	17,011	..	.	17,011	...	58,446	95	54	58,595	...	148,597	..	...	148,597	230,134
Total ...	.	10,794	...	...	10,794	.	22,588		...	22,588	.	156,938	..	.	156,938	...	64,428	5,565	9,087	79,080	..	182,482	...	...	182,482	451,882
Ganges.												**I.—Reserved Forests.**														
Regeneration—																										
(a) Selection fellings ...	..	831	24,109	4,745	29,685	...	58	...	...	58		34,982	...	..	34,982	...	3,692	...	...	3,692	...	...	..	...	...	68,417
Amelioration—																										
(c) Improvement fellings,	..	...	...	...	...	...	...	...	...	...	.	1,896	...	...	1,896	...	953	...	...	953	...	...	...	...	..	2,849
Unclassed fellings—																										
Dry	.	246	.	...	246	...	633	...	...	633		1,805	...	...	1,805	...	85,736	..	..	85 736	...	307,683	...	..	307,683	396,103
	..	1,077	24,109	4,745	29,931	...	691	...	...	691	...	38,683	...	.	38,683	...	90,381	...	...	90,381	..	307,683	...	...	307,683	467.369
												III.—Unclassed Forests.														
Unclassed fellings—																										
Dry	...	...	..	...	...	...	.	...	...	...	...	322	...	...	322	...	20,885	...	...	20,885		49,337	...	...	49,337	70,544
	..	...	...		...	...	...			...		322	.	.	322	.	20 885		...	20.885		49,337		...	49,337	70,544
Total ...	..	1,077	24,109	4,745	29,931	...	691	...	...	691	..	39,005	...	..	39,005	...	111,266	...	...	111,266	...	357,020	..	...	3,57,020	537,913

Form No. 54.

FOREST DEPARTMENT CENTRAL CIRCLE, NORTH-WESTERN PROVINCES AND OUDH

OUTTURN (IN CUBIC FEET, SOLID) OF TIMBER AND FUEL DURING THE YEAR 1890-91 AND AGENCY OF EXPLOITATION—(*concluded*).

Division	Timber in the rough, logs.					Timber in the rough; poles					Sawn or squared timber.					Miscellaneous					Fuel.					Total
	Government	Purchasers.	Free grantees	Right holders	Total	Government	Purchasers	Free grantees	Right holders	Total	Government	Purchasers	Free grantees.	Right holders	Total	Government	Purchasers.	Free grantees	Right holders	Total	Government.	Purchasers	Free grantees	Right-holders	Total.	Outturn.
Jhánsi											I.—Reserved Forests															
Regeneration— (*a*) Selection fellings	.	...	...	...	...	290	55	...	850	1,195		.	..		..	850	790	..	...	1,640	4,102	16,800	.	..	20,902	23,737
Total ..		.	...	..	.	290	55	.	850	1,195		...		.		850	790	...	..	1,640	4,102	16,800	.	...	20,902	23,737
Lalitpur.											I.—Reserved Forests.															
Regeneration— (*a*) Selection fellings ..	28	90	..	50	168	165	...	..	...	165		...	.	..	..	1,279	704	225	240	2,448	2,520	3,290	100	..	5,910	8,691
											II.—Protected Forests															
Regeneration— (*a*) Selection fellings .	20	130			150	513	3	...	...	516		...	...		...	87	524	...	294	905		3,460	100		3,560	5,131
Total .	48	220	...	50	318	678	3	...	...	681		...			.	1,366	1,228	225	534	3,353	2,520	6,750	200	...	9,070	13,822
Bánda											III.—Unclassed Forests															
Regeneration— (*a*) Selection fellings .		...	...	..	...	29,045	419	..	...	29,464		...	...	..	.	3,272	8,485	...	..	11,757	156	6,880	..	...	7,036	48,257
											ABSTRACT															
											I.—Reserved Forests															
Regeneration— (*a*) Selection fellings ..	28	31,782	24,542	6,575	62,927	455	113	...	850	1,418	217,824	6,162	.	223,986		2,129	5,186	225	240	7,780	21,812	118,534	100	...	140,446	436,557
(*b*) Coppice with standard.	.	.		.	..	...	...	...	...	...	47	...		47		...	...	.	...	...	...	13,970	...	...	13,970	14,017

Strip fellings ...	...	2,404	...	...	2,404	...	18,121	...	..	18,121	..	...	...	.	...	...	...	...	...	...	...	33,885	...	...	33,885	54,410
Amelioration—																										
(c) Improvement fellings,	...	8,001	...	...	8,001	...	47,024	96	...	47,120	..	48,910	...	.	48,910	...	1,082	...	...	1,082	...	62,214	...	...	62,214	167,327
(d) Thinnings ...	...	1,292	...	...	1,292	...	2,722	1,416	3,012	7,150		...	191	..	191	...	...	...	...	...	1,866	...	...	...	1,866	10,49[illegible]
Unclassed fellings—																										
Green	...	3,425	1,125	4,082	8,632	...	2,599	474	2,056	5,129	.	6,454	1,544	.	7,998	...	5,982	5,470	12,801	24,253	15,395	21,880	...	...	37,275	83,287
Dry	...	8,396	...	...	8,396	...	5,402	...	24,488	29,890	...	42,630	367		42,997	...	144,662	95	54	144,811	53,979	936,018	...	120,680	1,110,677	1,336,771
Total ...	28	55,300	25,667	10,657	91,652	455	75,961	1,986	30,406	108,828		315,865	8,264	..	324,129	2,129	156,912	5,790	13,095	177,926	93,052	1,186,501	100	120,680	1,400,333	2,102,868
II.—Protected Forests.																										
Regeneration—																										
(a) Selection fellings ...	20	72,594	4,960	52,048	129,622	513	3	...	...	516	.	...	...	...	...	87	524	...	294	905	35,712	120,340	100	...	1,56,152	287,195
Amelioration—																										
(d) Thinnings ...	..	...	..	...	...	...	7,970	1,764	55,788	65,522	.	...	...	.	...	...	...	...	...	...	928	1,240	...	...	2,168	67,690
Unclassed fellings—																										
Dry	...	40	...	...	40	...	...	...	...	...	..	...	...	...	...	...	..	...	...	...	27,816	108,000	...	...	135,816	135,856
Total ...	20	72,634	4,960	52,048	129,662	513	7,973	1,764	55,788	66,038	...	...	...	...	...	87	524	...	294	905	64,456	229,580	100	...	294,136	490,741
III.—Unclassed Forests.																										
Regeneration—																										
(a) Selection fellings ...	..	...	...	...	...	29,045	419	...	...	29,464	...	...	...	...	...	3,272	8,485	...	...	11,757	156	6,880	...	...	7,036	48,257
Unclassed fellings—																										
Dry	...	...	...	...	...	...	...	...	...	...	.	322		..	322	...	20,885	...	...	20,885	...	49,337	...	...	49,337	70,54[illegible]
Total ...	...	...	...	...	...	29,045	419	...	...	29,464	...	322	...	..	322	3,272	29,370	...	...	32,642	156	56,217	...	...	56,373	118,801
GRAND TOTAL .	48	127,934	30,627	62,705	221,314	30,013	84,373	3,750	86,194	204,330	...	316,187	8,264	..	324,451	5,488	186,806	5,790	13,389	211,473	157,664	1,472,298	200	120,680	1,750,842	2,712,410

NAINI TAL:
The 30th June 1891

S EARDLEY-WILMOT,
Offg. Conservator of Forests, Central Circle.

Form No. 55.

FOREST DEPARTMENT, CENTRAL CIRCLE, N.-W. PROVINCES AND OUDH.

OUTTURN OF MINOR FOREST PRODUCE DURING THE YEAR 1890-91.

Division.	Description of produce.		Produce removed or utilized. By Government agency: Quantity	By Government agency: Value	By purchasers: Quantity	By purchasers: Value.	By fee grants: Quantity	By fee grants: Value	By right holders: Quantity	By right holders: Value	Total: Quantity	Total: Value.	Remarks
						I.—Reserved Forests							
				Rs		Rs.		Rs		Rs.		Rs	
Naini Tal.	Bamboos	Nos.	..	...	6,300	79	...	...	...	...	6,300	79	
	Ringals	"	...	...	...	...	...	...	...	...	...	...	
	Grazing	...	...	...	...	1,680	...	...	...	..	...	1,680	
	Other minor produce ...	...	.	..	...	2,582	...	...	...	...	..	2,582	
	Total	...	...	...	...	4,341	.	...	...	...	...	4,341	
						II.—Protected Forests.							
	Bamboos	Nos.	...	...	520	7	...	...	...	...	520	7	
	Ringals	"	...	...	20,160	47	...	...	..	...	20,160	47	
	Grazing	...	..	...	...	484	...	...	...	...	...	484	
	Other minor produce ...	...	...	...	...	1,204	...	...	...	...	...	1,204	
	Total	...	...	..	...	1,742	..			.	...	1,742	
	GRAND TOTAL	...	..	..	..	6,083			..	.	..	6,083	
						I.—Reserved Forests.							
Kumaun.	Bamboos	Nos.	...	...	19,44,480	8,150	...	...	108,040	311	2,052,520	8,461	
	Grazing	...	...	...	..	13,711	...	...	...	...	...	13,711	
	Other minor produce ...	...	...	...	...	29,002	(a) ..	476	...	566	...	30,044	(a) Rupees 100 from drift wood included in this.
	Total	...		...	...	50,863		476		877	.	52,216	
						I.—Reserved Forests.							
Garhwal.	Bamboos	Nos	...	...	32,73,540	18,841	2,900	17	36,020	472	3,312,460	19 330	
	Grazing	...	...	...	...	3,703	...	...	...	...	...	3,703	
	Other minor produce ...	...	...	...	...	10,341	(b) ..	...	...	4	...	10,345	(b) Rupees 1,400 for drift wood included in this.
	Total	...?	...	...	...	32,885	...	17	...	476	...	33,378	

						I.—Reserved Forests.							
Gangas.	Bamboos	Nos.	...	...	94,06,480	73,147	480	2	...	...	94,06,960	73,149	
	Grazing	...	...	...	...	6,612	...	...	...	...	...	6,612	
	Other minor produce		...	...	...	6,099	...	...	...	...	...	6,099	
	Total	...	...	...	...	85,858	.	2	...	...	...	85,860	
						III.—Unclassed Forests.							
	Bamboos	Nos.	...	...	11,61,280	5,957	...	..	...	...	11,61,280	5,957	
	Grazing	...	...	...	...	328	...	...	...	...	...	328	
	Other minor produce		...	...	...	533	(e) ...	...	...	...	...	533	(e) Rupees 48 for drift wood included in this.
	Total	...	..	...	...	6,818	..	...	...	...	..	6,818	
	GRAND TOTAL	...	...	...	...	92,676	...	2	..	...	...	92,678	
						I.—Reserved Forests.							
Jhánsi.	Bamboos	Nos.	31,500	504	56,220	634	...	...	...	...	87,720	1,138	
	Grazing	...	...	...	...	4,920	...	...	...	...	...	4,920	
	Other minor produce		...	396	...	282	...	...	...	...	...	678	
	Total	...	...	900	...	5,836	...	..	...	...	...	6,736	
						I.—Reserved Forests.							
Lalitpur.	Bamboos	Nos.	1,94,460	991	1,05,120	540	600	3	...	...	3,00,180	1,534	
	Grazing	...	...	...	...	2,611	...	...	...	...	...	2,611	
	Other minor produce		...	82	...	1,622	...	...	...	...	...	1,704	
	Total	...	...	1,073	..	4,773		3	.	...	...	5,849	
						II.—Protected Forests.							
	Bamboos	Nos.	97,220	729	21,920	241	...	...	...	...	1,19,140	970	
	Grazing	...	...	...	...	486	...	...	...	...	...	486	
	Other minor produce		...	21	...	426	(d) ...	...	...	...	...	447	(d) Rupee 1 for drift wood included in this.
	Total	...		750	...	1,153	..	...	...	...	...	1,903	
	GRAND TOTAL	...	...	1,823	..	5,926	...	3	...	...	...	7,752	
						III.—Unclassed Forests.							
Bánda.	Bamboos	Nos.	23,701	216	1,600	12	...	...	...	...	25,301	228	
	Grazing	...	...	...	...	1,076	...	...	...	...	...	1,076	
	Other minor produce		...	127	...	2,115	(e) ...	.	...	...	...	2,242	(e) Rupees 15 for drift wood included in this.
	Total	...	...	343	...	3,203	...	...	...	...	...	3,546	

ABSTRACT.

Form No. 55.

FOREST DEPARTMENT, CENTRAL CIRCLE, N.-W. PROVINCES AND OUDH.

OUTTURN OF MINOR FOREST PRODUCE DURING THE YEAR 1890-91—(*concluded*).

Division.	Description of produce.	Produce removed or utilized. By Goverment agency. Quantity.	By Goverment agency. Value.	By purchasers. Quantity.	By purchasers. Value.	By free grants. Quantity.	By free grants. Value.	By right-holders. Quantity.	By right-holders. Value.	Total. Quantity.	Total. Value.	Remarks.
	I.—Reserved Forests.											
			Rs.		Rs.		Rs.		Rs.		Rs.	
	Bamboos ... ... Nos.	2,25,960	1,495	14,792,140	1,01,391	3,980	22	144,060	783	15,166,140	1,03,691	
	Ringals ... ... "	...	...	.	.	...	...	...	...	...	..	
	Grazing	...	...	...	33,237	...	...	...	...	...	33,237	
	Other minor produce	...	478	...	49,928	(a) ...	476	...	570	...	51,452	(a) Rupees 1,500 for drift wood included in this.
	Total ...	...	1,973	...	1,84,556	.	498	..	1,353	...	1,88,380	
	II.—Protected Forests.											
	Bamboos ... ... Nos	97,220	729	22,440	248	...	...	...	...	119,660	977	
	Ringals ... ... "	...	...	20,160	47	...	...	...	...	20,160	47	
	Grazing	...	...	...	970	...	...	...	...	...	970	
	Other minor produce	...	21	...	1,630	(b) .	...	...	...	...	1,651	(b) Rupee 1 for drift wood included in this.
	Total ...	...	750	...	2,895	...		...	-	...	3,645	
	III.—Unclassed Forests.											
	Bamboos ... ... Nos.	23,701	216	1,162,880	5,969	...	...	...	...	1,186,581	6,185	
	Grazing	...	...	...	1,404	...	...	...	...	...	1,404	
	Other minor produce	...	127	...	2,648	(c) ...	...	...	...	...	2,775	Rupees 63 for drift wood included in this.
	Total ...		343	...	10,021	.	...		...	...	10,364	
	GRAND TOTAL ...	...	3,066	...	1,97,472	(d) ...	498	...	1,353	...	2,02,389	(d) Rupees 1,564 for drift wood included in this.
	Total abstract.											
	Bamboos ... ... Nos.	346,881	2,440	15,977,460	1,07,608	3,980	22	144,060	783	16,472,381	1,10,853	
	Rangals ... ... "	...	...	20,160	47	...	...	...	...	20,160	47	
	Grazing	...	...	...	35,611	...	...	...	...	...	35,611	
	Other minor produce	...	626	...	54,206	(e) ...	476	...	570	...	55,878	(e) Rupees 1,564 for drift wood included in this.
	Total ...	...	3,066	...	1,97,472	(f) ..	498	...	1,353	...	2,02,389	(f) Rupees 1,564 for drift wood included in this.

NAINI TAL:
The 30th June 1891.

S. EARDLEY-WILMOT,
Offg. Conservator of Forests, Central Circle.

FORM No. 56.

FOREST DEPARTMENT, N W PROVINCES AND OUDH, CENTRAL CIRCLE

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPÔTS OR SOLD LOCALLY DURING THE YEAR 1890-91.

Particulars	No or quantity	Cubic feet.	Total of each head	
			No or quantity.	Cubic feet
Balance in hand at commencement of the year.				
Miscellaneous ballis	1,867	5,609		
Axle-trees	89	178		
Yokes	13	6		
Plough shafts	1	1		
Thin ballis for roofing	98	130	2,068	5,924
Firewood . ... . Mds	771	1,542	771	1,542
Charcoal ... ... "	72	720	72	720
Bamboos ... ... No	81,932	No.	81,932	No.
Kiras ... ... "	605	No	605	"
Kurias ... ... "	14,727	No	14,727	"
Grass ... . Bdles	114,200	Bdles	1,14,200	Bdles.
Received from the forests in depôts				
Miscellaneous ballis ...	1,688	2,268		
Koru	151	453		
Dandia	96	576	1,935	3,297
Firewood ... ... Mds	76,733	153,466	76,733	153,466
Charcoal ... . "	84	840	84	840
Bamboos ... ... No.	489,873	No	489,873	No.
Kiras ... .. . "	5,880	No	5,880	"
Kurias ... ... "	68,061	No	68,061	"

Particulars	No or quantity	Cubic feet	Total of each head	
			No or quantity	Cubic feet.
Removed by purchasers from depôts				
Miscellaneous ballis	2,503	5,904		
Axle-trees	49	98		
Plough shafts	1	1		
Thin ballis for roofing	97	129		
Koru	151	453		
Dandia	96	576	2,897	7,161
Firewood ... ... Mds	70,325	1,52,650	76 825	152,650
Charcoal ... . "	49	490	49	490
Bamboos ... ... No	316,133	No	316,133	No
Kiras ... . "	4,676	No	4,676	"
Kurias ... ... "	44,948	No	44,948	"
Grass . .. ... Bdles	77,375	Bdles	77,375	Bdles
Sold locally				
Miscellaneous ballis	1,052	1,487	1,052	1,487
Firewood ... . .. Mds.	5,745	11,490	5,745	11,490
Bamboos ... ... No	30,712	No	30,722	No
Kurias ... ... "	6,449	No	6,449	"
Grass ... ... Bdles	86,400	Bdles.	86,400	Bdles.
Hides ... ... No	19	No	19	No.
Axe	1	No	1	"

Form No. 56.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, CENTRAL CIRCLE.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPÔTS OR SOLD LOCALLY DURING THE YEAR 1890-91—(*concluded*).

Particulars.		No. or quantity.	Cubic feet	Total of each head. No or quantity.	Total of each head. Cubic feet.
RECEIVED FROM THE FORESTS AND SOLD LOCALLY.					
Miscellaneous ballis		1,052	1,487	1,052	1,487
Firewood	Mds.	5,745	11,490	5,745	11,490
Bamboos	No.	30,722	No	30,722	No.
Kurias	"	6,449	No.	6,449	"
Grass	Bdles	86,400	Bdles.	86,400	Bdles.
Hides	No.	19	No.	19	No.
Axe	"	1	No.	1	"
Grand Total ... Timber		...	...	5,055	10,708
Firewood ...	Mds.	...	...	83,249	1,66,498
Charcoal ...	"	...	...	156	1,560
Bamboos ...	No.	...	...	602,527	No.
Kiras ...	"	...	...	6,485	"
Kurias ...	"	...	...	89,237	"
Grass ...	Bdles.	...	...	200,600	Bdles.
Hides ...	No.	.	...	19	No.
Axe ...	"	...	...	1	"

Particulars.		No. or quantity.	Cubic feet.	Total of each head. No. or quantity.	Total of each head. Cubic feet.
LOST OR WRITTEN OFF AS USELESS.					
Grass	Bdles.	36,895	Bdles.	36,825	Bdles.
USED BY DEPARTMENT.					
Miscellaneous ballis		160	251	160	251
Bamboos	No.	3,690	No.	3,690	No.
BALANCE AT CLOSE OF THE YEAR.					
Miscellaneous ballis		892	1,722	...	...
Axle-trees		40	80	...	...
Yokes		13	6	...	...
Thin ballis for roofing		1	1	946	1,809
Firewood	Mds.	1,179	2,358	1,179	2,358
Charcoal	"	107	1,070	107	1,070
Bamboos	No.	251,982	No.	251,982	No.
Kiras	"	1,809	No.	1,809	"
Kurias	"	37,840	No.	37,840	"
Grand Total ... Timber		...	...	5,055	10,708
Fire wood ...	Mds.	...	...	83,249	1,66,498
Charcoal ...	"	...	...	156	1,560
Bamboos ...	No.	...	...	602,527	No.
Kiras	"	...	...	6,485	"
Kurias ...	"	...	...	89,237	"
Grass	Bdles.	...	...	200,600	Bdles.
Hides... ...	No.	...	...	19	No.
Axe	"	...	...	1	No.

NAINI TAL:
The 30th June, 1891.

S. EARDLEY-WILMOT,
Offg. Conservator of Forests, Central Circle.

Form No. 57.

FOREST DEPARTMENT CENTRAL CIRCLE NORTH WESTERN PROVINCES AND OUDH

ABSTRACT SHOWING THE VALUE OF TIMBER AND OTHER PRODUCE AT SALE DEPÔTS FOR THE YEAR 1890-91

Description of timber and other produce	On hand at commencement of the year			On hand at close of the year			Difference in value		Remarks
	No	Cubic feet	Value	No	Cubic feet	Value	In favour of the year	Against the year	
Timber			Rs			Rs	Rs		
Miscellaneous balks ..	1,867	5 609	370	892	1,722	546			
Axle trees	89	178	9	40	80	4			
Thin balks for roofing	98	130	14	1	1				
Plough shafts ..	1	1							
Yokes .	13	6	2	13	6	2			
Total, Timber	2 068	5 924	395	946	1 809	552	157		
Firewood, charcoal, &c									
Firewood Mds	771	1,542	148	1,179	2 358	294			
Charcoal ,	72	720	27	107	1 070	100	...		
Bamboos . Nos	81 912		893	251 982		3 013			
Kiras ,,	605		49	1 809		160			
Kurias .. .. ,	14 727		76	37,840	...	378		..	
Grass Bdles	114 200		71						
Total Fuel, &c		2 262	1,264		3 428	3 945	2,681		
Total .			1 659	..		4 497	2,838		

Net difference in favour of the year Rs 2,838.

Form No 57.

FOREST DEPARTMENT, CENTRAL CIRCLE NORTH WESTERN PROVINCES AND OUDH

ABSTRACT SHOWING THE VALUE OF LIVE AND DEAD STOCK FOR THE YEAR 1890-91

Description of live and dead stock	On hand at commencement of the year		On hand at close of the year		Difference in value		Remarks
	No	Value	No	Value	In favour of the year	Against the year	
Live Stock		Rs		Rs	Rs	Rs	
Elephants . .	11	16,700	10	15,400			
Bullocks	44	820	36	600		.	
Total Live Stock	55	17 520	46	16 000		1 520	
Dead Stock							
Buildings	148	1 08 326	172	1,19 615	.		
Sheds .	10	1 090	14	1,210		..	
Tools and plants ...	15 896	17 810	15 691	19,129			
Office and rest house furniture	624	2 555	775	3 138			
Carts .. .	25	1 25	24	600			
Almirahs	5	195	8	300			
Gunpowder barrels	2	86	2	84	...		
Slow match barrels	1	84	1	84			
Total, Dead Stock	16 711	1 30 771	16 687	1 44 160	13 389		
Total		1,48,291	.	1,60,160	13,389	1,520	

Net difference in favour of the year Rs 11,869

NAINI TAL
The 30th June 1891.

S HARDLEY WILMOT,
Offg Conservator of Forests, Central Circle

Form No. 58.

FOREST DEPARTMENT, CENTRAL CIRCLE, N.-W. PROVINCES AND OUDH.

SUMMARY OF REVENUE OF THE DIFFERENT DIVISIONS DURING 1890-91.

Budget Heads.	Direction	Naini Tal Division.	Kumaun Division.	Garhwál Division.	Ganges Division.	Jhánsi Division.	Lalitpur Division.	Bánda Division.	Total.
RECEIPTS.	Rs. a. p.	Rs. a. p	Rs. a. p	Rs. a. p	Rs. a. p	Rs. a. p.	Rs. a. p	Rs. a. p	Rs a. p
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—									
a. Timber	...	...	3,012 9 10	...	...	91 12 4	397 3 3	131 0 1	3,632 9 6
b. Firewood and charcoal	...	35,563 7 3	...	...	...	303 4 9	18 0 0	...	35,884 12 0
c. Bamboos	...	...	...	...	...	504 4 0	1,719 13 3	216 1 7	2,440 2 10
d. Sandal wood	...	...	..	...	...	...	...	...	...
e. Grass and other minor produce	...	...	...	...	...	396 3 3	103 0 0	127 4 0	626 7 3
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—									
a Timber	...	9,008 9 7	1,06,448 13 10	1,44,788 4 4	52,452 0 3	96 13 4	577 1 4	230 6 3	3,13,602 0 11
b Firewood and charcoal	...	8,460 2 0	8,811 2 6	2,173 9 5	2,552 6 6	840 3 8	171 7 0	87 15 6	23,096 14 7
c. Bamboos	...	132 9 0	8,150 5 11	18,841 5 7	79,104 6 10	634 0 6	780 10 0	12 0 0	1,07,655 5 10
d. Grazing and fodder grass	...	2,164 7 3	13,711 2 8	3,702 15 8	6,940 2 6	4,119 13 3	3,096 7 0	1,075 14 0	35,610 14 4
e. Other minor produce	...	3,785 13 3	28,902 4 2	8,940 9 0	6,584 9 2	282 1 6	2,047 6 0	2,099 7 0	52,642 2 1
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE,	...	...	100 2 0	1,400 0 0	47 8 0	...	1 1 0	15 3 9	1,563 14 9
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—									
a. Duty on foreign timber and other forest produce ...	...	...	...	...	...	...	...	15 0 0	15 0 0
b. Revenue from shared and private forests ...	...	...	...	...	...	...	...	...	...
V.—MISCELLANEOUS—									
a. Fines and forfeitures	...	0 8 0	6 0 0	40 0 0	...	...	...	...	46 8 0
b. Refunds	...	...	40 0 0	12 15 9	17 8 0	...	...	...	70 7 11
c. Other sources	15 2 0	77 1 9	1,387 3 0	1,112 1 7	105 8 0	113 9 0	2 8 0	683 11 0	3,496 12 4
Total Receipts ...	15 2 0	59,192 10 1	1,70,569 12 1	1,81,011 13 4	1,47,804 1 3	8,182 1 7	8,914 8 10	4,693 15 2	5,80,384 0 4

CALCUTTA:
The 15th June 1891.

J. C. BOSE,
Assistant Comptroller-General (Forests).

Form No. 58.

FOREST DEPARTMENT, CENTRAL CIRCLE, N W PROVINCES AND OUDH

SUMMARY OF EXPENDITURE OF THE DIFFERENT DIVISIONS DURING 1890-91.

Budget Heads.	Direction	Naini Tal Division	Kumaun Division	Garhwal Division	Ganges Division	Jhánsi Division	Lalitpur Division.	Banda Division	Total.
A—CONSERVANCY AND WORKS	Rs a. p.	Rs. a p	Rs a p	Rs. a p	Rs a. p	Rs a. p	Rs a p	Rs a p	Rs a p
I—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—									
a Timber ...	...	..	.	..	...	155 6 9	129 14 0	195 0 0	480 4 9
b Firewood and charcoal	..	18,808 13 7	.	.	...	213 5 8			19,022 3 3
c Bamboos . . .			.	...	...	381 6 9	636 12 7	262 8 1	1,280 11 5
d Sandal wood		.			...	.		.	
e Grass and other minor produce .		..	...	.		306 13 4	74 0 0	73 13 11	454 11 3
II TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMER OR PURCHASERS		798 15 6	6,727 15 6	7,198 15 4	10,162 10 0	1,069 0 10	652 12 1	476 4 8	27,086 9 11
III—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE,	.				...	..		..	.
IV—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—									
a Duty on foreign timber and other forest produce ..	..		..		...		.		
b Revenue from shared and private forests . .	..	..	..	.		...	..	.	...
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT . ..	.	..	...	...	..	..	..	538 12 9	538 12 9
VI—LIVE STOCK, STORES, TOOLS AND PLANT—									
a Purchase of cattle . . .	...		.	3,000 0 0		65 0 0		...	3,065 0 0
b Feed and keep of cattle .			1,283 14 11	3,272 13 6	1,307 0 10	341 11 0	1,253 3 1	.	7,458 11 10
c Purchase of stores, tools and plant	285 13 3	411 1 0	773 15 5	780 3 9	720 15 6	137 12 0	58 8 0	..	3,168 4 11
VII—COMMUNICATIONS AND BUILDINGS—									
a Roads and bridges	.	2,600 14 6	8 999 1 8	10 487 9 8	5,425 2 9	210 0 0	100 0 0	1,850 0 0	29,072 12 7
b Buildings	595 3 11	932 3 0	5,036 14 0	4,673 11 8	2,325 13 9	281 7 0	136 4 0	113 0 9	14,094 10 1
c Other works ..	.		636 10 1	499 1 4	7 14 0	..	.		1,143 9 5
VIII—DEMARCATION, IMPROVEMENT AND EXTENSION OF FORESTS—									
a Demarcation ..	..	941 12 11	350 0 0	231 2 11	2,341 8 1	348 9 6	...	200 8 6	4,413 9 11
b Compensation for land and rights .		770 8 8			.		..		770 8 8
c. Surveys and working plans	194 4 0	745 0 4	477 6 10	..	36 8 0				1,453 3 2
d Sowing and planting .. .		1,672 5 6	313 6 6	177 14 10	277 10 1	226 10 0	51 2 6		2,719 1 5
e Protect on from fire .	.	1,274 0 6	4 312 4 5	10,004 12 8	3,421 6 9	413 4 0	..	...	19 425 13 4
f Other works	...	1,983 6 2	935 6 4	929 2 8	734 0 6		..	.	4,651 15 8
IX—MISCELLANEOUS—									
a Refunds .. .			58 2 0	..	5 13 6	..			63 15 6
b Law charges . .		.					...	.	
c Other charges	13 15 0	124 11 4	359 10 0	860 12 10	247 14 11	50 6 7	33 7 0	.	1,690 14 5
TOTAL A.—CONSERVANCY AND WORKS .	1,069 4 2	31,063 13 0	30,264 12 5	42,186 5 2	27,014 6 8	4,200 13 11	3,125 15 3	3,710 0 8	1,42,655 7 3

CALCUTTA.
The 15th June 1891

J C BOSE,
Assistant Comptroller General (Forests)

Form No. 58.

FOREST DEPARTMENT, CENTRAL CIRCLE, N W PROVINCES AND OUDH.

SUMMARY OF EXPENDITURE OF THE DIFFERENT DIVISIONS DURING 1890-91—(*concluded*).

Budget Heads.	Direction	Naini Tal Division	Kumaun Division.	Garhwál Division.	Ganges Division.	Jhánsi Division.	Lalitpur Division.	Bánda Division.	Total.
	Rs a p	Rs. a. p	Rs. a. p	Rs. a. p	Rs. a. p	Rs a p	Rs. a p.	Rs a. p	Rs a. p
Brought forward Total A Conservancy and Works ..	1,089 4 2	31,063 13 0	30,264 12 5	42,186 5 2	27,014 6 8	4,200 13 11	3,125 15 3	3,710 0 8	1,42,655 7 3
B.—ESTABLISHMENT									
I.—SALARIES—									
a. Conservators	13,021 4 6	...	...	...	..	...	...	...	13,021 4 6
b. Superior officers	236 10 8	6,943 5 4	7,169 14 3	6,154 8 0	7,492 14 5	600 0 0	...	...	28,597 4 8
c. Subordinate forest and depôt establishments	..	3,549 13 2	7,483 3 1	9,209 11 0	7,502 5 10	1,155 14 11	1,760 0 0	1,423 6 9	32,084 6 9
d. Office establishments	4,188 3 0	1,080 0 0	2,019 12 6	1,932 2 8	1,787 2 6	60 0 0	444 0 0	713 11 4	12,225 0 0
e. Deputation and special allowances	...	1,800 0 0	...	...	162 3 6	...	...	...	1,962 3 6
II.—TRAVELLING ALLOWANCES—									
a Conservators	1,745 10 3	...	...	...	..	...	...	...	1,745 10 3
b. Superior officers	50 0 0	939 0 0	1,476 8 0	988 6 0	1,115 6 0	196 2 10	...	...	4,765 6 10
c. Subordinate forest and depôt establishments ...	...	380 4 10	985 13 3	1,448 3 5	1,067 15 10	180 0 0	210 0 0	212 3 9	4,484 9 1
d. Office establishments	276 15 5	84 8 0	535 10 8	504 0 0	636 1 4	...	5 8 0	61 15 2	2,104 10 7
III.—CONTINGENCIES—									
a. Stationery	8 2 3	49 0 0	133 13 1	..	57 1 0	18 0 0	16 13 6	21 4 0	304 1 10
b Carriage of tents and records	589 14 6	410 3 5	388 2 10	477 1 9	585 8 4	171 7 6	...	4 13 3	2,627 3 7
c. Rents, rates and taxes	113 9 8	22 0 0	11 0 0	11 0 0	10 0 0	12 0 0	...	...	179 9 8
d Pay of police guards	297 8 7	...	...		...	..		...	297 8 7
e. Official postage	295 10 6	96 3 0	98 1 6	71 10 0	92 0 6	32 8 0	57 9 0	6 0 0	749 10 6
f. Sundries...	495 4 9	100 3 6	422 9 1	523 6 11	168 14 7	8 14 0	16 0 3	28 3 3	1,763 8 4
TOTAL B.—ESTABLISHMENTS ...	21,318 14 1	15,454 9 3	20,724 8 3	21,320 1 9	20,677 9 10	2,434 15 3	2,509 14 9	2,471 9 6	1,06,912 2 8
GRAND TOTAL OF EXPENDITURE ...	22,408 2 3	46,518 6 3	50,989 4 8	63,506 6 11	47,692 0 6	6,635 13 2	5,635 14 0	6,181 10 2	2,49,567 9 11

CALCUTTA:
The 15th June 1891.

J. C. BOSE,
Assistant Controller-General (Forests).

Form No. 59.

FOREST DEPARTMENT, CENTRAL CIRCLE, N.-W PROVINCES AND OUDH

ACCOUNT CURRENT FOR THE YEAR 1890-91.

Dr.

	Rs a. p.	Rs. a. p
To Cash Balance		15,892 2 9
„ *VIII—Assessed Taxes—*		
Income Tax—Deductions from salaries . .		1,331 12 11
„ *Revenue as per Annual Summary, Form No* 58	..	5,80,384 0 4
„ *Service Funds—*		
Civil Funds—Ordinary Bengal	..	..
„ Additional, Bengal . ..		...
Military Fund—Bengal	48 15 10	.
„ „ Madras .. .	..	..
„ Orphan Fund—Bengal .	42 5 5	...
Uncovenanted Service Family Pension Fund—Bengal	325 10 0	..
General Family Pension Fund		..
Hindu Family Annuity Fund..		.
		416 15 3
„ *Deposits*	...	1,792 0 0
„ *Forest Cash Remittances—Local—*		
Forest cheques drawn	2,47,857 4 0	...
Inter Divisional Transfers .. .	47 0 0	
		2,47,904 4 0
„ *Advances recoverable*		33,247 4 11
„ *Suspense*	..	27 5 9
„ *Account Current (other Governments)—*		
Remittances from Government of India . .	5,388 9 2	...
„ „ „ Bombay .	500 0 0	
		5,888 9 2
„ *Inter Departmental Transfers—*		
Public Works Department—Ordinary	.	430 13 0
Military Department	...	.
Civil Department—		
Survey of India	22 12 0	.
Mathematical Instrument Department	465 8 0	
Miscellaneous	748 8 0	..
		1,236 12 0
Total .	...	8,88,552 0 1

Cr.

	Rs a p	Rs. a p
By Expenditure as per Annual Summary, Form No 58	..	2,49,567 9 11
„ *Deposits*	...	1,792 0 0
„ *Forest Cash Remittances—Local—*		
Remittances to Treasuries	.	5,44,155 6 1
Inter Divisional Transfers	...	
„ *Advances Recoverable*	...	35,150 14 6
„ *Suspense*	...	68 0 9
„ *Account Current (other Governments)—*		
Remittances to the Government of India .	64 12 0	...
„ „ Bombay ..	500 0 0	..
		564 12 0
„ *Inter Departmental Transfers—*		
Public Works Department—Ordinary ..	...	3,463 5 10
Military Department—Bengal	...	33,969 15 9
Civil Department	..	.
Mathematical Instrument Department . ..	..	15 2 0
„ *Cash Balance*	..	19,904 13 3
Total ...	.	8,88,552 0 1

CALCUTTA
The 15th June 1891

J C BOSE,
Assistant Comptroller General (Forests).

Form No. 60.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, CENTRAL CIRCLE

REVENUE RECEIVED AND OUTSTANDINGS ON ACCOUNT OF REVENUE DURING 1890-91.

Division	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	TOTAL.	Amount realized during year.	Balance due to the Department at end of year
		Rs. a. p	Rs. a. p	Rs. a p	Rs. a p	Rs. a. p.
Direction ...	Timber, poles, grazing dues and minor produce.	...	15 2 0	15 2 0	15 2 0	..
Naini Tal ...	Ditto ditto ...	656 0 0	59,420 10 7	60,076 10 7	59,192 10 1	884 0 6
Kumaun ...	Ditto ditto ...	3,017 1 0	1,67,552 11 1	1,70,569 12 1	1,70,569 12 1	...
Garhwál ...	Ditto ditto ...	...	1,81,011 13 4	1,81,011 13 4	1,81,011 13 4	...
Ganges ...	Ditto ditto ...	...	1,47,804 1 3	1,47,804 1 3	1,47,804 1 3	...
Jhánsi ...	Ditto ditto ...	89 1 0	8,292 0 7	8,381 1 7	8,182 1 7	199 0 0
Lalitpur ...	Ditto ditto .	...	9,065 0 10	9,065 0 10	8,914 8 10	150 8 0
Bánda .	Ditto ditto ..	901 10 3	5,062 8 2	5,964 2 5	4,693 15 2	1,270 3 3
	Total ...	4,663 12 3	5,78,223 15 10	5,82,887 12 1	5,80,384 0 4	2,503 11 9

NAINI TAL:
The 30th June 1891.

S. EARDLEY-WILMOT,
Offg. Conservator of Forests, Central Circle.

Form No 61.

FOREST DEPARTMENT, CENTRAL CIRCLE, N.-W. PROVINCES AND OUDH.

OUTSTANDINGS AND LIABILITIES ON ACCOUNT OF CONTRACTORS AND DISBURSERS FOR 1890-91.

Division.	Department Debtor.			Department Creditor.			Balance due.	
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year	At close of year.	At commencement of year.	Payments made during year	At close of year.	To Department (outstandings).	By Department (liabilities).
	Rs a. p.	Rs a p	Rs. a p	Rs. a p.	Rs. a. p	Rs a p.	Rs. a p.	
Direction	...	714 13 4	714 13 4	187 0 0	855 0 0	1,042 0 0	327 2 8	...
Naini Tal,	..	857 14 5	857 14 5	281 12 7	2,716 1 10	2,997 14 5	2,140 0 0	...
Kumaun,	...	10,099 7 7	10,099 7 7	1,409 13 3	9,301 8 4	10,711 5 7	611 14 0	...
Garhwál,	...	7,580 3 9	7,580 3 9	698 15 0	7,647 3 8	8,256 2 8	675 14 11	...
Ganges...	0 0 4	6,648 3 11	9,618 4 3	390 6 0	9,467 4 6	9,857 10 6	209 6 3	...
Jhánsi ...	...	1,963 2 0	1,963 2 0	233 14 9	1,783 7 0	2,017 5 9	54 3 9	...
Lalitpur,	...	1,259 15 0	1,259 15 7	370 15 7	1,089 0 0	1,459 15 7	200 0 0	...
Bánda .	...	1,123 8 4	1,123 8 4	28 14 10	2,291 5 2	2,320 4 0	1,196 11 8	...
Total ...	0 0 4	33,247 4 11	33,217 5 3	3,511 12 0	35,150 14 6	38,662 10 6	5,415 5 3	...

CALCUTTA:
The 15th June 1891.

J. C. BOSE,
Asst. Comptroller-General (Forests).

Form No 62.

FOREST DEPARTMENT, N. W PROVINCES AND OUDH, CENTRAL CIRCLE

FINANCIAL RESULTS OF THE YEAR 1890-91.

Division	Timber and other produce removed from the forests by Government agency		Other revenue		Formation, protection and improvement of forests	Total		Remarks
	Receipts	Charges	Receipts	Charges	Charges.	Receipts	Charges	
	Rs	Rs	Rs	Rs	Rs	Rs	Rs	
Direction			15			15		Direction Division Charges amounting to Rs 22 408 distributed amongst divisions as follows —
Naini Tal	35 568	26,051	23,630	7,836	14,631	59 193	48 518	
Kumaun	3 013		1,67,557	28 964	28 625	1,70 570	57 589	
Garhwal			1,81,012	33 146	37 961	1 81,012	71,107	
Ganges			1,47 804	28 021	24 671	1,47,804	52,692	
Jhansi	1,296	1,475	6 886	2 612	2 940	8,182	7,036	
Lalitpur	2,238	2 624	6,676	1,779	1,833	8 914	6,236	
Banda	474	1,170	4,220	2,427	2,793	4,694	6,390	
Total .	42,584	31,320	5,37,800	1,05,085	1,13,163	5,80 384	2,40,568	

	Rs
Naini Tal .	2,000
Kumaun .	6 600
Garhwal	7 600
Ganges	5,000
Jhansi	400
Lalitpur	600
Banda	208
Total	22 408

The debits have been made as follows —

Naini Tal and Lalitpur ..

I—Timber and other produce

$$A\left(1 + \frac{VI}{2} + \frac{VII}{3} + \frac{IX}{3}\right) + \frac{B}{3} + \frac{\text{Direction quota of charges}}{3}$$

II—Other produce

$$A\left(II + III + IV + \frac{V}{2} + \frac{VII}{3} + \frac{IX}{3}\right) + \frac{B}{3} + \frac{\text{Direction quota of charges}}{9}$$

III—Formation, protection and improvement of forests

$$A\left(\frac{VI}{2} + \frac{V}{2} + \frac{VII}{3} + VIII + \frac{IX}{3}\right) + \frac{B}{3} + \frac{\text{Direction quota of charges}}{3}$$

Kumaun, Garhwal and Ganges,

I—Timber and other produce

Nil.

The receipts in Kumaun (3,013) were obtained at the expenditure of Rs 1,974 debited last year

II—Other revenue

$$A\left(II + III + IV + V + \frac{VI}{2} + \frac{VII}{2} + \frac{IX}{2}\right) + \frac{B}{2} + \frac{\text{Direction quota of charges}}{2}$$

III—Formation, protection and improvement of forests

$$A\left(\frac{VI}{2} + \frac{VII}{2} + VIII + \frac{IX}{2}\right) + \frac{B}{2} + \frac{\text{Direction quota of charges}}{2}$$

Jhansi and Banda .

I—Timber and other produce

$$A\left(I + III + IV + \frac{V}{6} + \frac{VI}{6} + \frac{VII}{6} + \frac{IX}{6}\right) + \frac{B + \text{Direction Division quota of charges}}{12}$$

II—Other produce

$$A\left(II + \frac{V}{3} + \frac{VI}{3} + \frac{VII}{3} + \frac{IX}{3}\right) + \frac{5}{12} \text{ of B and Direction Division quota}$$

III—Formation, protection and improvement of forests

$$A\left(\frac{V}{2} + \frac{VI}{2} + \frac{VII}{2} + VIII + \frac{IX}{2}\right) + \frac{\text{B and Direction Division quota}}{2}$$

NAINI TAL
The 30th June 1891

S EARDLEY WILMOT,
Offg Conservator of Forests, Central Circle

No. $\frac{59}{A}$ L.G. of 1891.

From

W. SHAKESPEAR, Esq.,

Officiating Conservator of Forests,

North-Western Provinces and Oudh,

Oudh Circle,

To

The CHIEF SECRETARY to GOVERNMENT,

North-Western Provinces and Oudh,

in the Revenue (Forests) Department.

Dated Naini Tal, the 1st August 1891.

Sir,

I have the honour to submit the Annual Forest Report of the Oudh Circle for 1890-91.

I have the honour to be,

Sir,

Your most obedient servant,

W. SHAKESPEAR,

Offg. Conservator of Forests,

N.-W. Provinces and Oudh,

Oudh Circle.

OUDH CIRCLE FOREST REPORT, 1890-91.

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ERRATA.

Oudh Circle Forest Report, 1890-91.

Page 1, line 2, after "surplus" add "but one."

„ 4, in table of Divisional charges, Pilibhít and Bhira Divisions to be bracketed.

„ 4, in ditto column 2, under Bahraich and Gonda, for "senior" read "Sub."

„ 5, para. 17, line 1, for "senior" read "Sub."

„ 5, „ 17, „ 16, for Rs. "50" read "60."

„ 7, „ 22, substitute revised table.

„ 8, „ 22(*a*) substitute revised table. Omit "double" in fourth line from end of paragraph and add "owing to the dry season being unusually protracted," and for "three" "Gorakhpur" and "nine" read "two" "Gonda" and "one" in second line from end of para.

„ 9, para. 22(*b*), in first line, for "abstracts" read "actuals" and substitute revised table.

„ 14, para. 33, in first line after III add "roads, &c." and in table opposite Kheri under 10′ to 20′ f. add "5" and opposite total for "1" read "6."

„ 20, para. 43, substitute revised table.

„ 22, „ 47, in second line after table for "booked" read "but one."

„ 29, form 49, column 6, after "6132"; and "7197" in column 7 after "141," "196," "4998," "1123," "127"; and "6587," in column 8 after "96903," "96,453," "209155," "99078," "100428" and "770316," for commas read decimal points.

„ 32, form 51 in remarks column after "average cost per acre on" add "actually and," and omit "and actually" after "to be." Omit third figure of decimals throughout. Opposite Bhira Division for "5·26" read "6·30"; Kheri Division for "1·09" read "12·92"; Bahraich Division for "3·99" read "3·98"; Gonda Division for "11·766" read "1·76."

„ 35, form 52, against total "cultural operations" for "41" read "73:"

„ 37, form 54, against grand total in column of fuel total for "c. ft. 23,74,742" read "23,82,300."

„ 48, form 56, against entry 11 "fuel" in column 4 for "mds. 7550" read "7553."

„ 50, form 57, in abstract against total mds. in column 7 for "765824" read "765·824."

„ 51, form 57A, in abstract of circle column 8 omit "Rs. 23,511" against live stock, and insert same against "dead stock."

„ 53, form 58, total of A-I*a* expenditure for "Rs. 1,89,740" read "Rs. 1,59,740" and total of A-IX*b* for "Rs. 28" read "98" and in total of A for "Rs. 2,91,693 read "2,91,643."

„ 54, form 58, total of B establishment, for "Rs. 11,072" read "1,11,072."

„ 56, form 60, column 4, in total for "Rs. 7,04,411" read "7,81,111."

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FOREST DEPARTMENT, NORTH WESTERN PROVINCES AND OUDH.
ANNUAL PROGRESS REPORT OF FOREST ADMINISTRATION FOR THE YEAR 1890-91, OUDH CIRCLE

INTRODUCTION.

THE year has been one of considerable progress, more produce having been exploited, better rates obtained, work more economically done, and the highest surplus since the circle was formed booked, Kheri, Bahraich, and Gorakhpur mainly contributing to this

2 On March 28th His Excellency the Viceroy opened the Gola-Pilibhít section of the Lucknow-Pilibhít-Bareilly Railway, the fair weather branch of this system from Mailani to the trans-Sarda forests will be taken in hand shortly, while the steam tramway from Shahjahánpur *via* Pawayan may be expected to link in before very long We shall thus soon have considerable facilities for removal of produce from the Pilibhít, Bhira, and Kheri Divisions to the hitherto comparatively remote markets of Bareilly, Shahjahanpur, and Hardoi

3 The Department had on hand a large supply of sleepers for the Rájputána-Malwa and Bengal-North-Western Railways and took up one of over six lakhs c ft of fuel for the Rohilkhand and Kumaun line

CHAPTER I

AREA AND BOUNDARIES

1.—AREA

4 Form 49 exhibits the divisional details These abstracted for the circle give—

Class of forest	On hand at commencement of the year	Added during the year	Excluded during the year	Net added	Total at end of year
	Square miles				
Reserved	1 203	11	10	1	1,204

5 The changes are in round figures by divisions *Pilibhít*, 141 *acres and Bhira*, 197 *acres*.—Alienated for the new Lucknow Pilibhít Railway by Notifications Nos 206F and 203F. of February 28th, 1891 *Bahraich*—6,133 acres in the Bhinga range received from the Rája of Bhinga and Taluqdars Raghunandan Singh and Hira Singh in exchange for 4,998 acres, by six notifications of February 26th, 1891. The lands acquired consist of seven populated villages and abandoned cultivation. *Gonda*—The addition is for an equivalent of 1,060 acres exchanged, the excess exclusion being 58 acres given for the Bengal and North-Western Railway (Notifications Nos 556F of August 1st, 1890, 95F and 197F of February 7th and 28th, 1891) The exchange got rid of inferior forest in Shambhunagar, Jeypur, and Rámgarh for the almost pure sál areas of Dehunagar and Jotpur, district and private forest, and admitted of the Barwár tribe being settled The owner of Jotpur was compensated by being given 618 acres in the Pithipal district forest *Gorakhpur*—128 acres were alienated for the Bengal and North-Western Railway (Notification 200F of February 28th, 1891) Corrected figures cannot be given as the settlement ones have not yet come in

6. The exchanges have all been beneficial, not only in gain of better class of forest, but consolidation of blocks and reduction of intricate boundaries. A good deal still remains to be done in this direction in Bahráich and Gorakhpur.

2.—Boundaries.

7. The details of work under this head resulted as below :—

Division.	Boundary lines			Ditching		
	New	Repaired.	Existing total at end of 1890-91	New.	Repaired	Total at end of 1890-91.
	M F	M F.	M F	M. F	M. F.	M F
Pilibhít ..	...	20 2	34 6	...	...	91 0
Bhira ...	...	.	.	...	...	166 2
Kheri ..	...	13 4	13 4	...	7 6	7 6
Bahramghát ...	..	.	..	.	.	...
Bahraich ...	15 4	61 0	118 0	8 4	83 0	302 7
Gonda ..	...	72 0		...	72 0	130 0
Gorakhpur ...	...	48 1	70 1	...	65 6	65 6
Total ...	15 4	214 7	236 3	8 4	178 4	763 5

The total outlay was Rs. 932 against Rs. 2,523, and Rs. 1,566 in last year and 1888-89, or less by Rs. 1,591 on 1889-90.

All boundaries are reported as in order.

8. *Pilibhít.*—A short length of ditching on eastern limit of Dauairghát closed reserve (old grant 16) is required to mark off the low ground near the Chuka stream given up some years ago. Temporary marks of two former occasions not having been substantiated and correspondence resulting, the Divisional Officer, with the patwári and grantee's agent, laid down a line within the meaning of Government orders, and reported the matter to the Collector, in the hope that it may be accepted and further trouble avoided. The limit of grant 18 (same reserve) (mentioned in paragraph 8 of last year's report) was also enquired about. The question of its correctness has been re-opened after many years, and apparently on the assumption that the village map must be correct and the Imperial Revenue Survey one not so. The area claimed is a small awkwardly shaped corner, jutting abruptly out of open *low* ground on to a clearly defined forest clad *high* bank. As pillars cannot be pointed out, the 4″ scale survey map does not show the corner, the land has never been broken up, the natural features of the ground preclude the probability of the boundary being taken within the high bank, the claim was not preferred for years, and the forest gazetted a reserve under section 34 of the Forest Act in *1879*, it may reasonably be assumed the area is State property. The Collector to whom a report was sent will, it is trusted, accept the Divisional Officer's views. The correctness of the limit on extreme west of reserves in the Pilibhít tahsíl was also again questioned (after a long silence) by a petition to the Collectorate towards close of the year, but it is not understood how claims to have our limits gone over now can hold for reserves gazetted in 1879 under section 34 of the Forest Act. *Bhira.*—The boundary disputed by Unchagaon (Khareta) village may be taken as correct, nothing having been heard since the kanúngo visited the locality. The exchange of Mr Sirkar's land within "closed" (last report under Chapter II) for a plot in "open" reserve was not completed, as Conservator decided that the matter should be referred to Government and plans made. The Divisional Officer reports that Mr. Sirkar only wishes for an equivalent and not excess area. The boundary of closed reserve will alone be slightly affected. The adjustment of the private land limit in Khamaria (last report, paragraph 6) was taken up but on the kanúngo reporting that over 52 acres excess were found in grantee's possession, the file was returned to the Deputy Commissioner. *Kheri.*—The 13 miles of Nepál boundary were

cleared at Rs. 17 a mile. Three monoliths were put up in place of pillars 175, 177, and 181, under supervision of the Deputy Commissioner and a Nepál official. The exchange of land with Khairigarh not having been consummated, owing to the estate being under the Court of Wards, clearing of the boundary, last done some 22 years ago, was not taken up. *Bahramghát.*—The rectification of the saw mills and depôt limits were under consideration, but nothing was decided beyond that the Public Works Department asked Rs. 5,000 for the buildings on the plot notified for transfer to the Forest Department in G. O. No. $\frac{989C}{XII-163}$ of July 12th, 1890, and the Conservator did not assent to pay it. *Bahraich.*—Thirty-three miles of 3′ deep ditching was done at Rs. 12-12-0 and Rs. 15 a mile in the Motipur and Chakia Charda ranges and the entire length of the Nepál boundary departmentally cleared was inspected by the Deputy Commissioner. *Gonda.*—Sixty miles of ditching and pillars were repaired at Rs. 281, and 12 miles of lines and pillars at Rs. 65. The 30′ on our side of the Nepál neutral strip was cleared, but the Darbár again failed to do their side. The Deputy Commissioner writes that he has, through the Commissioner, reported to Government that it is nearly six years since the Nepál Darbár was requested to clear their side of the strip. *Gorakhpur.*—The dispute about Chilua Tal in Bhillampur Forest was pending in the Civil Court, but expected to be soon decided.

CHAPTER II.

SURVEYS, WORKING PLANS, AND ANNUAL PLANS OF OPERATIONS.

1.—Surveys.

9. *Bahraich.*—Rupees 160 were booked for surveying the lands received in exchange from the talúqdárs, noted under "Areas," the cost coming to just over five pies per acre. *Gonda.*—Surveys were petty, in continuation of last years, and of exchanged lands and rest-house compounds.

2.—Working Plans.

10. The plans for Kheri and Gorakhpur mentioned in last year's report were completed by Captain Wood; the former has gone on to the Local Government since close of the year, and the latter is in the Press. The framing of the plans was carried out without special expenditure and fell as extra work on the Circle Office. The necessity of a special officer and working plans branch is noted in the Local Government review on last year's report.

11. The only recognised plan for Kheri was, as usual, worked up to.

3.—Annual Plans of Operations.

12. The forecast has been generally exceeded in remunerative works, while non-paying undertakings have not as a rule reached anticipation. The main deviations from the plans are as follows :—

Pilibhít.—Departmental timber and fuel works short. *Bhira.*—Fellings short from want of efficient supervising staff. Fuel not railed to Lucknow depôt as abundant stock remained in hand and new yield was being disposed of near the forests. *Kheri.*—Excess on departmental timber works, but other and non-paying ones were not fully carried out from want of supervising agency. *Bahramghát.*—The saw mills outturn of converted material absorbed nearly Rs. 8,000 short of allotment, while the drift operations, owing to favourable floods, necessitated an extra charge of over Rs. 800; the non-remunerative working heads expenditure was a good deal less than anticipated. *Bahraich.*—Timber and fuel works in excess. Minor produce allotment was not reached. Work on roads, buildings, and fire conservancy required less, but special protection against grazing, an excess disbursement. *Gonda.*—Departmental timber and

minor produce works considerably short of plans, but those on fuel much in advance The forecast on buildings and wells was not reached D marcation, fire conservancy, and miscellaneous works were carried out in excess of plan, but on "Plantations" were not up to anticipation *Gorakhpur* —Departmental timber, fuel, and drift works were in excess of forecast especially the last with a correspondingly favourable income Undertakings under "Buildings" went beyond sanction, but other unremunerative works were not fully carried out. Extensive thinnings account for heavy excess under "Improvement" head

CHAPTER III.

PROTECTION AND IMPROVEMENT

1 —Establishment

13 The divisional charges were held as follows —

Division	Name of officer	Held charge. From—	Held charge. To—	Remarks
Circle Direction,	Captain Wood Conservator ..	Whole year		
Pilibhit ..	Mr Hill, Assistant Conservator	April 1st, 1890 .	July 6th 1890	Transferred to Kheri Division
Bhira .	Mr Shakespear, Deputy Conservator	July 7th, 1890	March 31st, 1891	
Kheri ..	Mr Allan, ditto	April 1st, 1890	July 2nd, 1890	Retired from July 3rd
Do. ...	„ Hill, Assistant Conservator	July 3rd, 1890	September 12th 1890	
Do ..	Mr Campbell, ditto .	September 13th, 1890	March 31st, 1890	
Bahramghát	Babu Raghubar Dyal	Whole year		
Bahraich ..	Mr Rebsch, Assistant Conservator	April 1st, 1890	July 1st 1890	Fills a Sub Assistant's post of Rs 200
Do	Ditto ditto ..	September 24th, 1890	March 31st, 1891	
Do	Mr Raghunath Pattak, Senior Assistant Conservator	July 2nd, 1890	September 23rd 1890	During Mr Rebsch's privilege leave
Gonda ...	Mr Karuna Nidhan Mukarji, Senior Assistant Conservator	Whole year		
Gorakhpur	Mr Campbell, Assistant Conservator	April 1st, 1890	September 20th 1890	
Do	Mr Hill, ditto ..	September 21st 1890	March 31st, 1891	

Thus for eight divisions [Bhira is practically a division, with an area little short of any other (except Kheri and Bahraich), fulfilling all the conditions of an independent charge] the year opened with six and closed with five controlling officers (paragraph 7, Forest Code), while two of the superior executive staff worked Gonda and Bahramghát independently throughout the year, and the third, attached to Gorakhpur, held charge of Bahraich for nearly three months.

14. The circle was thus worked with less supervising power than during the previous three years, and the favourable results are all the more creditable

15 One officer, Mr Allan, retired on a superannuation pension Mr Ponsonby (his papers for retirement have gone in since the year closed) was on leave the whole year, but only one other officer, Mr Rebsch, was away, and that on privilege leave The severance of Captain Wood's long relationship with the circle so soon after the close of his last year as its Conservator may permit of my here recording his retirement on April 30th, after a 24 years' intimate connection with, and control of, the Oudh forests The progress made during nearly a quarter of a century can be best testified to by those that have followed the late Conservator's administration and those that have helped him in bringing about the present departmental status Before closing his career Captain Wood wrote an interesting history of the Oudh forests that it is hoped may shortly be available for perusal

16. Of two Sub-Assistant Conservators' posts on Rs. 200, one was given to Mr. Raghunath Pathak and the other reserved for Mr. Knowles, at Dehra. The staff below the rank of Sub-Assistant Conservator remained as before; but during the year a revised scale, including Rangers and temporary establishment, was submitted and estimated to cost annually Rs. 52,967 against the present Rs. 46,187. The necessity of an exceptionally strong protective staff is called for by the position and increasing value of the forests, and the exceptionally petty demands on them. The re-organization of the office establishments was under the Conservator's consideration. Mr. Barrow remained at the Dehra Dún School the entire year, having been kept back in March 1890, and eventually returned to Kheri as a Forester. Mr. Knowles joined the school in July 1890.

17. *The Protective Establishment*—Has done fairly on the whole. Senior Assistant Conservator Raghunath Pathak is specially mentioned in connection with Gorakhpur "drift" operations. Rangers Jafir Husain, Husain Shah, Parmeshri Din, and Kampta Parshad, with Foresters Badri Parshad (temporary) and Anant Parshad, are well reported on. Jafir Husain and Parmeshri Din got steps, Kampta Parshad and Muhammad Ali being promoted to Rangerships. Two permanent establishment Foresters were reduced and fined (one being also transferred) for irregularity in money matters. Mr. E. C. Carr, Forester, was suspended, and resigned. Of two Foresters in *Pilibhít* one is a hill man not knowing Urdu, and the other a temporary establishment hand of long, but scarcely approved, service. The staff in *Pilibhít* and *Bhira* is not up to efficiently working the "Chauki Permit" system, and a similar condition for "drift" work is reported from Bahramghát. *Pilibhít* deserves, from peculiar relationship to village communities and the system of working, a better class of subordinates with at least a Sub-Assistant at their head. Four Guards resigned and eight were dismissed from both establishments in this division, while in *Bhira* a Rs. 50 Ranger left in April for a Rs. 30 reduced Forester sent in September. The progressive felling and other works here merit a better staff. Seven Guards resigned and seven were dismissed. In both the above divisions regular rosters for Guards were started, and it is hoped to secure better men. Messrs. Moreton and May were employed on "works" in *Kheri*, the former from October to end of the year and the latter from February to resignation from sickness on June 24th. The Divisional Officer was "favourably impressed" with Mr. May's work. The *Bahramghát* "drift" establishment did badly, a daroghá and jamadár being criminally convicted and dismissed for fraud, some watchers sharing the same fate for dishonesty and carelessness, while others absconded under a cloud.

It is believed that the services of the forest establishment were fully availed of in all divisions for census work, and it is hoped advantageously.

The Superintendent of Bahramghát was made a special District Magistrate in February.

2.—General Protection and Breaches of Forest Law.

18. Protection has been fairly good under the difficulties attendant on meeting varied rights and privileges, on the feasibility of private proprietors to clear their own lands and draw on ours "free," on having a large proportion of temporary men without much prospects, and on the absence of a larger reliable supervising agency. Better Guards might be secured by opening out chances of moving up from the temporary and fire conservancy lists, and there is no reason why we should accept men without proof of respectability and physical fitness.

19. *Pilibhít* and *Bhira*.—As before, special protection was afforded to "closed" reserves by confining sales to "open" ones, but this will with the privileged demand and firing tend to soon unduly expose the former. The Chauki Permit system is not conducive to protection. The "open" and "restricted" reserve compartments

over which the zamíndárs in Puranpur (Pilibhít) themselves issued permits suffered much, to say nothing of the risk to the adjoining areas. Protection from fire is almost impossible under the concessions for burning the "open" compartments. The people in Pilibhít are unfortunately very touchy and, except in their own lands, scarcely recognise any right of protection. The year closed with an undecided case of a Guard being tied up by zamíndárs and kept without food for three days for asking help to suppress a fire in Puranpur. Two of the three ranges were adjusted into more compact blocks. In *Bhira* two ranges were formed. The plan of firing "open" reserve to protect the "closed" centre was modified, with fair success for the first year. Protection from grazing is becoming difficult in the Barouncha forest owing to adjacent lands coming under cultivation and owners preferring to risk detection in the near "closed" to going a little further to the "open" reserve. *Bahramghát.*—Interests in drift on the five rivers were guarded with difficulty, subordinates and traders having freely combined to defraud; of six of the establishment and 16 traders implicated, several were either fined or imprisoned or both, punishments ranging from Rs. 20 and three months to Rs. 50 and nine months and from one month to one year's imprisonment only. An improvement before the year ended is reported. *Bahraich.*—The chief difficulty is in protection against grazing. A special establishment, costing Rs. 1,042, was employed to prevent it. *Gonda.*—Protection is much improved, 18 chaukis were established on the south boundary of the Tulsipur forests, Guards' beats defined, and the connecting road almost finished. Main exits from Nepál and all lines bearing on systematic checking were cleared. *Gorakhpur.*—Opposition to working of drift decreased, but protection must be difficult when a Magistrate can remark in his finding (on a dismissed case against the Department by Nepál) that a Sub-Inspector "has acted in a most irregular and foolish way in making over property into informant's hands." A request for the Sub-Inspector's removal was made to the Bengal Government.

20. *Forest offences*—Classified are shown to have been as follows :—

Class of offence.	"A" Court cases.					"B" Section, 67 cases.					Total of 1890-91.	Persons implicated in—				Total Persons.	
				On 1889-90.					On 8189-90.			"A" Cases.		"B" Cases.			
	1888-89.	1889-90.	1890-91.	More.	Less.	1888-89.	1889-90.	1890-91.	More.	Less.		1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91
Injury by fire ...	6	6	3	...	3	1	2	1	...	1	4						
Unauthorized felling, &c.	36	25	26	1	...	64	45	49	4	...	75	131	160	264	247	395	407
Illicit grazing ...	23	37	49	12	...	41	20	33	13	...	82						
Other offences ...	9	1	17	16	...	7	16	10	...	6	27						
Total ...	74	69	95	26	...	113	83	93	10	...	188	131	160	264	247	395	407

The result is an increase of 26 Court and 10 compounded cases, or 36 in favour of the year, with a total of 188 against 152 in 1889-90 and 187 in 1888-89. Only 12 more persons were concerned than in 1889-90. "Illicit grazing" claims the largest increase in 25, "other offences" (mainly "drift" ones) coming next with 10. In order of numbers the figures go to "grazing," "unauthorized felling, &c.," "other offences," and "fires." On both classes of cases the percentage of convictions is 94 and the number of persons per case 2⅛ against 93⅛ per cent. and 2¾ of 1889-90. The largest increase in Court cases is under "other offences" and in compounded under "grazing."

21. The offences distributed to divisions and compared with last year give—

Class of offence.	Pilibhít.		Bhira.		Kheri.		Bahramghát.		Bahraich.		Gonda.		Gorakhpur.		Grand Total.	
	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.
Injury by fire ...	3	3	...	1	...	...	...	...	2	...	1	...	2	...	8	4
Unauthorized felling, &c.,	1	3	8	8	...	1	...	10	11	9	2	13	48	31	70	75
Illicit grazing ...	...	6	4	7	1	...	...	...	18	39	24	20	10	10	57	82
Other offences ...	...	...	...	...	...	1	...	13	2	3	...	...	15	10	17	27
Total ...	4	12	12	16	1	2	...	23	33	51	27	33	75	51	152	188
On 1889-90 ... More ...	...	8	...	4	...	1	...	23	...	18	...	6	...	...	...	36
On 1889-90 ... Less ...	...	...	...	...	...	...	...	...	...	...	...	...	...	24	...	...

The comparison shows greater vigilance in most divisions. In totals of increase Bahramghát, Bahraich, and Pilibhít are most marked. In "Court" cases the increases are mainly in Bahramghát and Bahraich, and in compounded ones Gonda heads the list. Gorakhpur alone has a general decrease. Under "fire" Bhira alone has an increase, while Bahraich, Gonda, and Gorakhpur are short of last year, showing that that up in March was even more favourable than 1889-90 (last report, paragraph 21). For "unauthorized felling, &c.," Bahramghát and Gonda are far ahead, with Gorakhpur showing a falling off of 17. Two of the Bahramghát cases are very important—theft of sleepers from Lucknow Depôt—and the punishments in them are the heaviest of the Circle, being 10 years' transportation and two years' rigorous imprisonment, but it seems that the thieves were old offenders in private cases. *Kheri* and *Gorakhpur* are alone in not booking an increase under "grazing." For "other offences" *Bahramghát* is ahead with increase of 13. The best percentage of convictions falls to *Bahraich* at 96 and the lowest to *Kheri* with 50.

22. The compounded cases stand thus :—

Divisions. / Class of offence.	Pilibhit.		Bhira.		Kheri.		Bahraunghát.		Bahraich		Gonda.		Gorakhpur.		Total.	
	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.
Injury by fire ...	...	...	...	1	...	...	...	...	...	...	1	...	1	...	2	1
Unauthorized felling ...	...	3	1	8	...	1	...	..	...	...	...	10	44	27	45	49
Illicit grazing ...	...	5	4	7	1	...	...	1	1	...	4	15	10	6	20	34
Other offences ...	...	...	...	...	...	...	...	1	1	...	...	...	15	8	16	9
Total ...	...	8	5	16	1	1	..	2	2	...	5	25	70	41	83	93
On 1889-90... More ...	...	8	...	11	...	...	...	2	...	...	...	20	...	...	...	10
On 1889-90... Less ...	...	...	...	...	...	...	...	...	2	...	...	...	...	29	...	...

Gonda heads the increase with 20. In *Bahraich* settling under section 67 was not availed of. The *Gorakhpur* decrease of 29 may, in absence of explanation by Divisional Officer, be taken as partially due to different views of the two officers in charge during the year. The excesses under "unauthorized felling" and "illicit grazing" are contributed to by Gonda, Bhira, and Pilibhít. The cases, persons concerned in them,

and the compensation comes to 93, 246, and Rs. 915-7-0 against 83, 259, and Rs. 1,071-6-0, or an increase of 10 cases, with a fall of seven in persons and Rs. 155-15-0. The averages per case and person are Rs. 9-13-0 and Rs. 3-11-4, that is, a decrease on both. The highest figures are respectively Rs. 11-1-6 in Gonda and Rs. 5-4-3 in Gorakhpur, and the lowest 12 and four annas in Kheri. The powers under section 67 seem to have been fairly availed of as the "Court" cases are only two in excess of the compounded, but with 87 fewer persons, probably attributable to several being concerned in each grazing case. The only return of cattle impounded is from *Bahraich* and shows 2,815 head against 1,201 of last year. There are three forest pounds in this division.

3.—Forest Fires.

22*(a)*. Form 51 in abstract for three years gives :—

Areas.	1888-89.	1889-90.	1890-91.	On 1889-90.	
				Increase.	Decrease.
Areas attempted to be protected ...	Acres 487,919	Acres 495,341	Acres 495,101	Acres 240	...
Burnt out of above ...	" 50,706	" 28,828	" 28,351	...	Acres 477
Saved out of	" 466,513	" 469,513	" 466,750	Acres 237	...
Total cost	Rs. 11,525	Rs. 13,082	Rs. 12,808	Rs. 274	...
Cost per acre, ...	Pies 4 49	Pies 5 38	Pies 5 26	...	Pies 12
Percentage saved of attempted areas ..	89	94	94	...	...
Percentage of attempted to total forest area, Form 49.	63	64	64	...	...

The above figures are only for the "closed" forest, and I regret that an attempt to give a return for all areas "saved and burnt" with and without special measures and in relation to the aggregate forest area had to be given up from want of complete data. "Open" forests, though not apparently of much value, and probably entirely burnt, may escape, but a statement of not even approximate figures would have been almost useless. New railways through Pilibhít, Bhira, and Gorakhpur have made the forests more liable to fires, and early burning of grass along the lines seems to be the only real safeguard against possible damage. Complaints of the carelessness of Nepál villages come from Kheri and Gonda.

The area attempted is actually more by 72,538 acres of available "open" added in *Pilibhít* and *Bhira*, and the failures increased on this account. The saved total, however, is 38,592 more than last year's, while the expenditure is less with the same proportion to the total forest area. The season, an exceptionally trying one, did not end till well on in July, and the results are therefore all the more satisfactory. Messrs. Campbell and Rebsch and their staff may be congratulated on the immunity from fire of the attempted "portions" of the Kheri and Bahraich Divisions—the more remarkable in the former, as there were over 1,500 sawyers in the forests till May and carting continued till July: the cost, however, is more than double that of last year.

The cost per acre this season varies from three pies in Gorakhpur to one anna nine pies in Kheri against two to 12 pies in 1889-90, in different divisions.

22(*b*) The divisional abstracts are as follows, cost being in nearest round figure —

Division	Conservancy, commenced	Total Form 49 Acres	Number of fires	Area attempted to be protected Acres		Area burnt Acres		Percentages of burnt to protected		Cost per acre of attempted	
			1890 91	1889 90	1890 91	1889 90	1890 91			1889-90	1890 91
										Pies	Pies
Pilibhit	80—86	96,904	14	43,778	65 638	10 375	18 067	23 9	10 9	12	7
Bhira ..	85—88	96 545	15	46,016	96,454	579	38,308	1 2	39 8	5	5
Kheri .	72 & 81	168 298		71,880	71,880	1 340	..	1 8		10	21
Bahraich .	75—85	209 155	...	1,57,760	1,57,760	288		1	.	4	4
Gonda ..	80 & 87	99,078	14	93,137	94,137	10 237	6 164	1 2	6 2	2	11
Gorakhpur	75 & 86	110,428	2	76,770	76,770		1 905		2 4	5	3
Total .		770,316	45	4,95,341	5,67,639	22 828	59,534				

The area attempted is increased only in *Pilibhit* and *Bhira* by available "open" forests being looked after for the first time with the good result of about five-sixths and a half escaping respectively without increase of cost Owing to this extra "open" area, the total "failure" is more in Pilibhit, but the "closed" portion burnt is 6,687 acres less than last year Of the 14 fires in *Pilibhit* seven were in the closed reserves; the first in Dandura range early in January, and the last in Mainakot on June 16th The origin of four was not traced, two came from village lands and one was due to workmen's carelessness, this was the largest, covering 9,000 acres of grass and tree growth in Mainakot on the 10th March There was a very high wind, and this suddenly chopping round, nothing could check the flames from crossing the lines Grass glades formed the greater portion burnt One offender received two months' rigorous imprisonment in this case and four temporary hands were dismissed The areas varied from 9 to the above 9,000 acres, making total of 9,688 out of the 43,735 gazetted as "closed." It is hoped that it prompt reporting to the police is continued, the area burnt will gradually decrease The other seven fires were in the 12 restricted compartments of Puranpur and covered 3,379 out of an estimated 21,903 acres Origin of five was not traced and two crept in from village lands, one of these in Pilibhit overran the whole of compartment 4 (2,260 acres) and is that in which help refused by the Nadha villagers was emphasized by the tying up of the Guard for three days (see paragraph 19, Chapter III) The Collector was asked to try the case, but it is regretted that a subordinate Court's vernacular proceeding has recently shown that the lambardár alone was fined Rs 40 with 25 days' imprisonment for, it is believed, the gravest obstructive action coupled with an apparently unsupported countercharge against a single Forest Guard yet recorded in the circle against people enjoying large privileges The departmental subordinates having to attend Court five times to find the defendant "not present" and once more before the above sentence was passed is also not encouraging

Bhira —The additional 50,695 "open" brought the attempted total up to 96,454, nearly half of this being saved with less expenditure than last year's on "closed" alone this season's result was satisfactory, though 10,594 acres burnt out of the usually "closed reserve" is far more than in 1889-90 Of 15 fires eight were in closed blocks, the earliest on February 7th and the last on June 16th, ranging from two to 8,971 acres. Six were not traced, one extended from department firing, and one came in from the village lands of Kokra This of 8,971 acres is the largest since that of 16,900 acres in April 1888, and though evidence against certain villagers was promptly recorded by the Forest Officer under section 71 of the Forest Act, and the police *chalánéd* the case, intimation just received from the Deputy Commissioner of Kheri shows it to have been thrown out This is extremely unfortunate and disappointing after all the damage to growing forest and dead stock and the trouble taken to bring the probable offenders to book. The evidence taken by the Divisional Officer certainly pointed to one of two lots of men, either graziers or coolies, being guilty, and protective efforts will be considerably affected in future by the adverse finding,

Of the seven fires in the newly attempted "open" the largest covered 13,440 acres on April 15th, in the large expanse of country to the south-east always burnt. No trace was found to any of these fires; they either crept in from private forests or were started by incendiaries. *Gonda.*—Conservancy was more systematically done, and some new lines cut, one 40 miles by 500 feet broad along the Nepál frontier. The season's work was generally satisfactory, about 6 per cent. only of attempted area being burnt; that is less than in the past two years. Entire success was attained in the Nawábganj range, but in Mansurwa large areas were lost, the most serious fire having overrun 2,500 acres after crossing the Nepál border. A Forester was reprimanded, a Guard and watcher dismissed, and two Guards fined in connection with this. There were 14 fires, varying from eight to 2,500 acres in extent; two came over from Nepál, five could not be traced home (though minor produce collectors were suspected in three), and seven are put down to incendiarism, in one case an ex-watcher being suspected. Two cases against five persons led to conviction, three against eight were compounded under section 67, one was under police investigation, and there was not any clue to go on in the other eight. *Gorakhpur.*—Against total immunity last year 1,905 acres were lost in this by only two fires—of 550 acres in Rámgarh by sparks from a locomotive, and 1,355 in Bhilampur, probably from incendiarism, as the burning commenced in the centre of the area. Unfortunately searching inquiry did not lead to any clue. To reduce risk from engines the Bengal and North-Western Railway were asked to order engine drivers not to "fire up" while passing through forests, and it is hoped that the action taken in response will prove effective.

The "open" forests, "buffers" for protection of more valuable centres, might also be protected as far as possible without unduly exposing the centres. As every year must see the stock for meeting requirements of bordering villages get less, and the centres more threatened, tree growth in the buffers should not be destroyed, and the question of grass met by allowing limited grazing in portions of the closed centres, if necessary, as a set-off for protection in the "buffers." There cannot be any harm in impressing on our neighbours by precept and example that it is better not to fire tree and grass-clad areas indiscriminately; but it was with diffidence that a change was contemplated in *Pilibhít* and *Bhira* by attempting protection of available "open" areas.

4.—Grazing and Fencing.

23. The following table shows areas and number of animals grazed by divisions :—

Division.	Total Forest Department areas, square miles, on March 31st, 1891.	Area open.		Area closed.		Percentage of closed to total area, column 2	Number of cattle grazed		Acreage per head.	
		1889-90.	1890-91.	1889-90.	1890 91					
		Square miles	Square miles	Square miles	Square miles		1889-90.	1890-91.	1889-90.	1890-91.
Pilibhít ...	151	83	83	69	68	45·18	17,318	26,170	3 07	2·03
Bhira ...	151	80	80	71	71	47 01	13,086	10,888	3·91	4·65
Kheri ...	263	152	152	111	111	42·20	74,878	77,493	1 30	1 27
Bahraich ...	327	218	219	107	108	33 02	85,322	116,119	1·63	1·21
Gonda ...	155	74	74	81	81	52·25	46,181	49,445	1 02	0·95
Gorakhpur ...	157	52	52	105	105	66 87	42,297	52,995	0 79	0·63
Circle Total ...	1,204	659	660	544	544	45·18	279,082	333,119	1 36	1·27

For *Bhira* the actual of privileged animals for this, and the total of non-privileged for last, year have been taken 1889-90 circle report numbers are entered for *Pilibhit*, though inclusive of 3,694 in transit only. The circle areas are scarcely different to last year's, the net result being an addition of 610 acres under "open" The large increase of 54,037 in the animals is mainly accounted for by 15,096 "free" in *Pilibhit*, due to more correct data, nearly 21,000 in *Bahraich* (last year's figures were only to date of report), and 10,698 in *Gorakhpur* from fewer animals being taken to Nepál and local men preserving their grass. The only decrease is in *Bhira* of 2,198 The largest percentage of closed area is with the smallest acreage per head in *Gorakhpur*.

Pilibhit—21,769 animals grazed "free" in Puranpur, while 4,410 paid in Pilibhit of the latter 4,218 were from within three-mile limit. Fewer animals passed through the forests, perhaps pointing to less trade from Puranpur *Bhira*—At first only nine entire privileged villages engaged to graze out of 98, a few joining later on. Divisional Officer intimated his readiness to hear evidence for exemption under Rule II The Kokia zamíndár owning large areas objected to pay at all, but the Deputy Commissioner agreed that there were not any grounds for exemption The Divisional Officer suggests the opening of closed areas from July to end of January without expecting undue damage, but rather an increased revenue, improved tree growth, diminution of inferior species and inflammable material. *Kheri*.—Out of the large total 77,493, 49,452 paid reduced rates, and 5,649 grazed "free." *Bahraich*.—The Bhinga forests are reported as ruined by over-grazing, "mere closing" being of no avail. The privileged number would have even exceeded 77,170 if animals had not been omitted in a tahsíl return, *Gonda*—Great difficulty was experienced with the grazing under the Balrámpur lease. The Oudh rules not being applicable, there was absolutely no control. *Gorakhpur*.—Full fees are paid The issue of only yearly permits did not affect the income.

24 The Oudh grazing rules (paragraph 24, last report) are not mentioned by *Kheri* and *Gonda*. In *Bhira* the Deputy Commissioner (of Kheri) at first agreed with late Deputy Conservator that every one or no one should graze, but in March thought if half a village assented, Rule I might be taken as complied with In *Bahraich* a difference of opinion still exists The Deputy Commissioner referred the question, and the interpretations of the rules arrived at (after consultation with the Chief Secretary) communicated to him and the Forest Officer were briefly that the prescription of Rule 1 might be considered as fulfilled if, say, three-fourths of the owners agreed, but the majority should not be liable for dissenters, and that individuals not on the patwaris' list should not be liable, but any one on that list should not be let off without the very strongest evidence under Rule II The Forest Officer now reports that "there was correspondence, but nothing appears to have been settled," that "in recent grazing appeals the Deputy Commissioner evidently does not consider the matter as decided," and, in a case last month the remark was made "they cannot be excluded under Rule 1" Thus the rules seem still liable to be misconstrued.

The position seems to be one of obligations, the State, having made special concessions on the assumption that from pressure of demand practically every owner must use the forests, has also the right to withdraw these concessions and to expect substantial proof of the special demand, to guard itself against fraud, &c, it imposes certain obligations on those whose pressing needs have been recognised, one of these obligations being through Rule I that graziers shall pay in such a proportion as to justify special treatment by the proprietor, Government. The villagers failing to maintain their position, Government might withdraw the concessions in area and rates.

25 *Fencing*—6½ furlongs of single barbed wire was stretched on the low posts, noted last year, in the Barouncha (Bhira) reserve at Rs 81 a mile, inclusive of cost of wire, and though serving to keep out village cattle, is knocked about by wild animals. In *Gorakhpur* the small bamboo plantation at Sakhui and the Ramgarh 6,724 clumps were fenced in.

5.—Natural Reproduction.

26. Natural reproduction by seed is everywhere good on areas exempted from fire and over-grazing or that have been closed for even a few years. Coppice, too, seems generally very vigorous.

Pilibhit.—Coppice everywhere good. Seed fall in the east not so abundant as last year, and the little that dropped rotted. To the west and south (Dansira) fall and germination better than in 1889-90. *Bhira.*—Coppice, seed fall, and germination good. *Kheri.*—Sál in Newalkhar exceedingly satisfactory, due to protection and systematic exploitation of mature trees. The spread of sissu in the Bandhi block is most marked. Thirteen years ago there were only a few large trees; now all stages of growth are found. Sál has seeded well. *Bahraich.*—All reproduction is very satisfactory in Nishángara, sál seedlings averaging 15 feet high. Coppice in 1884-85 thinned area is vigorous. In Murtiha the result of only two years' closing is a profusion of healthy seedlings. In Chakia the reproduction is chiefly of "asaina" (*Terminalia tomentosa*). Coppice from the primary strip fellings in Charda shows vigorous growth and has escaped insects. In the grazed over portions, however, there is not any reproduction. The condition in Bhinga continues hopeless from former over-felling, fires, and over-grazing, closing not having yet effected any appreciable change. The growth is mature sál. Improvement is marked in Gabba, closed since 1886. *Gonda.*—Closing for even a couple of years shows most favourable results, but a hopeless condition is noted for the open portions. In sections I to IV sál and asaina with especially "dhao" (*Anogeissus latifolia*) are doing well. "Dhao" in Tulsipur is taking possession of ground favourable for sál, and Asaina. Khair and sissu are making good progress. In the whole of Nawábganj (resumed grants) the almost pure sál coppice of 10 to 20 years is thriving, but seedlings are still scarce. The areas thinned and strip felled during past four years show vigorous coppice with few seedlings. Two years' shoots have reached a height of eight to 10 feet. Attacks of caterpillars cease after the first season. *Gorakhpur.*—The reproduction over the improvement felled areas is exceedingly good.

6.—Artificial Reproduction.

27. Form 52 in abstract gives the following figures :—

Class of work.	1889-90.	1890-91.	1889-90.	1890-91.	Remarks.
	Acres.	Acres.	Rs.	Rs.	
Regular plantation	2,642	2,698	2,534	2,372	Printed figures for 1889-90 adopted.
Cultural operations	73	34	1,212	431	
Circle Total ...	2,715	2,732	3,746	2,803	

The total area is increased by 23 acres with a less expenditure of Rs. 943. The cost per acre of plantations varied from Re. 1-2-0 in *Gorakhpur* to Re. 1-8-5 in *Bhira* and came to Rs. 10-13-9 in *Kheri* for "cultural operations." Thirty-nine acres less under "cultural work" is due to the 32 at Marha being put under "plantations" and five of "experiments" in *Bahraich*, with two of failures in *Gonda* removed from the form. The only addition, 24 acres, is to the Sakhui sissu plantation in *Gorakhpur*, and brings its area up to 2,204. *Regular plantations* show decreased expenditure of Rs. 162. *Bhira.*—Rupees 21 were spent on the Marha 32-acre plot for opening out shisham and bamboos on ridges and mounds, and preparing for filling blanks next rains over 15 acres of 1889-90. The seedlings have failed a good deal, probably from ground being low and the mounds becoming baked as the water recedes. The "khair" looks well, but bamboos have not made appreciable progress. *Gorakhpur* (*Rámgarh*).—Bamboo seed from Orissa having failed, plants were not put out: 6,724 existing

clumps were fenced at Rs 210 Fire caused by sparks from a railway locomotive scorched a good many clumps, but permanent damage is not feared Rupees 939 were spent on planting and cost of bamboo seed. (*Madhaulia*) —Sissu planted in 1876-77 not thriving from want of thinning, 385 more or less suppressed trees were removed from the "four-acre plot," and the 910 remaining already show improvement in leaf canopy The girths of 1′ to 2′ (with exceptions up to 3′) in five years compare unfavourably with that of 10 years' old stems in Sakhui Heavy thinning was justified on observation of 4, 5′, and 7′ girths of 11 trees planted at from 8′, 9′, 11′ to 19′, 24, and 25′ apart in a line near the Lachmipur house, and that the distances in the Sakhui plantation are 15′, 20′, 24′, and 30′. Captain Wood thinks 30′ and Mr Hill (the Divisional Officer) 24 as the best distance or 48 and 75 trees to the acre There were nearly 324 trees per acre before and 227 after the operation The Sakhui sissu plantation of 1881-82 has as before done well; 149 trees were removed from the old portion originally planted closer than experience is said to now dictate "Tun" and bamboos were put into blanks A 14½-acre plot planted with bamboos at 30′ apart and fenced (for Rs 13) and a 10½-acre plot furnished with 6 high tun are doing well Sales of grass more than covered all expenses Rupees 26,500 income against Rs. 21,518 expenditure for past 10 years shows a net annual return of Rs 4,982 *East Lehra* suffered in the rains, so the 5,134 trees were banked up for Rs 168.

28 *Cultural operations*—Show a decrease of 39 acres treated and of Rs 781 spent.

Kheri returns 33 acres and Rs. 353 spent. Sissu and bamboo did well except where floods interfered or the sites are low. Natural reproduction is generally so good that little more is required anywhere Five experimental acres and two of failures are struck off the return for Bahraich and Gonda.

7.—Early thinnings, removal of inferior species, &c.

29 Thinnings proper extended over 505 acres in *Gorakhpur* (Rámgarh), yielding 70½ solid c. ft. per acre

30. *Removal of inferior species and creepers* —The extensive area of 16,592 acres were gone over besides large casually treated ones in Kheri. By divisions we have—*Bhira* —683 acres in three localities at three annas five pies per acre, Rs 56 being saved on Rs 200 in the annual plan *Kheri.*—Eight acres were cleared of "all creepers," but rate cannot be quoted as work formed part of an improvement felling, a saving of Rs 230 on Rs 350 is, however, shown. *Bahraich* —6,120 acres done at one anna two pies average in Motipur and Bhinga, excess of Rs 54 on allotted Rs. 400 being booked. *Gonda.*—2,500 acres treated at seven pies an acre, 59,910 climbers being removed and a saving of Rs. 112 on Rs 200 effected. *Gorakhpur.*—All climbers were cut on 1,299 felled acres at not quite 3½ annas an acre.

8 —Improvement fellings.

31. The aim, as usual, was to better the condition of forests presenting a stock varied in quality and species, by applying the "improvement (selection)" and "strip felling" systems Strip felling is most difficult and expensive to carry out properly, and by it all kinds of growth are removed or left indiscriminately with the advantage that a large volume can be collected within a small area and regeneration by seed is favoured to a certain extent

During the year selection fellings covered about 15,188 (exclusive of a portion of Bahraich), and strip fellings about 154 acres, *in Bhira* alone Roughly 628 and 445 solid cubic feet per acre were yielded In *Pilibhit* 22 acres of closed and 37 of restricted compartments in different ranges gave per acre 400 and 616 cubic feet solid on forest measurements, the proportion of sál being only about a fourth *Bhira.*—Half chain wide strips in last year's unfinished compartments gave 445, and "improvement" cuttings on about 261 acres, 195, solid c ft per acre. *Kheri.*—In 14

compartments 13,428 acres gave 2·6 of inferior sál trees, 33·92 solid c. ft. per acre, and 12·8 c. ft. solid per tree. Eighty-eight asaina as well as 35,472 sál were removed. Eight acres done under the Conservator's control yielded 87 bad trees, 83 poles, and 18,650 c. ft. stacked firewood at a cost of Rs. 120. *Bahraich.*—Selected trees on 58 acres of uncut strips sold at Rs. 45 an acre, and gave 1,720 solid c. ft. per acre for all species, the stems numbering 19,600 sál and 5,960 other kinds. Fellings, continued in Nishángara and commenced in Gabba, were not finished. *Gonda.*—700 acres yielded 297′ solid per acre. In *Gorakhpur* felling over 974 acres gave a return of 545 c. ft. and a very handsome income. Captain Wood was much struck with the improvement. Mr. Hill illustrated the condition of the areas before and a few years after treatment in some photographs that were sent to the Local Government.

9.—Experiments and Exotics.

32. Appendix I gives such girth measurements as may perhaps be depended on. The general increment for the year is just short of an inch per tree.

Bhira.—Loss from dryage in a year on 3′ to 5′ sál fuel billets came to 12 per cent. and 8 per cent. on mixed kinds. Difference is due to the latter being comparatively large and mature. 100 c. ft. stacked gave of dry mixed fuel 31, of sál 30, and of baib grass 15 maunds. Messrs. Cooper, Allen & Co. of Cawnpore stripped sál and asaina bark "free" to 29th March, and a large quantity was removed. The firm state that the barks gave a somewhat harsh and brittle tannage and of a darker colour than is desired; it hopes, however, to use the material in conjunction with ordinary tanning agencies. Judging by the enormous quantity of bark consigned from private forests, the value of it must be considerable. *Bahramghát.*—The mahogany in the depôt compound have done well and reached 13′ to 18′ height. Three sál planted in 1883 are from 14′ to 24′ with 8″ to 15″ girth. Most of the miscellaneous trees planted in 1878 are over 30′ high. *Gonda.*—400 "dhao" (*Anogeissus latifolia*) hammer handles were sent to the East Indian Railway Store Department, to be experimented on against English ones: three maunds two seers of dhao leaves and three maunds 12 seers of bark went to Messrs. Cooper, Allen & Co., and 3lb. of bark to London for trial in tanning: two "dhao," one "dhamina" (*Grewia tiliæfolia*), and one "bel" (*Ægle marmelos*) logs were consigned to Lucknow to be experimented on for cask staves. Reports on results were not received by close of year. *Gorakhpur.*—Measurements of sissu trees left in Madhaulia after thinnings were commenced.

10.—Communications and Buildings.

33. The usual details are in Appendices II and III. New works and repairs were done as shown below :—

Divisions.	New works, 1890-91.								Repairs, total miles.		Total at close of year				Grand Total.	
	20′ to 50′.		10′ to 20′.		Less than 10′.		Cost.				Roads 10′ and over.		Paths less than 10′.			
	M.	F.	M.	F.	M.	F.	Rs.		M.	F.	M.	F.	M.	F.	M.	F.
Pilibhít ...	...		...		2	1	68		199	0	160	2	58	1	218	3
Bhira ...	...		3	2	1	4	211		226	1	189	2	91	5	230	7
Kheri ...	...		...		...		...		248	0	289	6	...		289	6
Bahramghát ...	...		...		...		...		0	6	0	6	...		0	6
Bahraich ...	...		4	5	...		201		322	0	349	4	...		349	4
Gonda ...	12	6	2	7	...		...		185	4	172	7	28	3	201	2
Gorakhpur ...	...		9	3	...		527		59	0	68	5	...		68	5
Total ...	12	6	20	1	3	5	1,007		1,240	3	1,181	0	178	1	1,359	1

Increase of 33 miles of major and four of minor roads closes the year with a total of 1,359 miles. Rupees 11,271 were booked against Rs. 11,359 in 1889-90 at a saving

on the annual plans owing to want of supervising staff and some lines not requiring attention every year Repairs were done to 1,240 miles and all bridges, at rates varying from Re 1 to Rs 10 per mile of 15 lines The departmental 15′ line from Chuka to Mustafabad (Pilibhít) was widened to 75 and raised by the District Board as a feeder to the new railway

New works comprised in *Pilibhít* an 8′ inspection, and compartment line in Dananaghát closed reserve *Bhira* —A 15 line at Rs 65 a mile to bound Morehna reserve (closed in January 1890) on the west, and a boundary inspection path in Allenganj In *Bahraich* three 15′ lines—one in Bhinga and two in Chakia Charda *Gonda*—Nine roads of 20′ covered 15¾ miles—six in Mansurwa, one in Barehwa, and two in Nawábganj The Department is indebted to Balrámpur for half the outlay on the Chauki, Jerwa, and Bhambar lines, Rs 269. Three 15′ roads were made in *Gorakhpur* at Rs 52-12 0 a mile—two in west and one in East Lehra. Stumping out on the Daibhar-Madhaulia line was, with the making of the Pharenda-Mahárajganj road, in hand

34 In *Kheri* the Soheli bridge was, as usual, dismantled and re-constructed, but the Pasiapur one, washed away, was not put up again The Srinagar bridge of boats on the Sarda was dismantled, but in the abnormal floods two boats were sunk and found useless on recovery, 12 new boats were constructed against 10 allowed for in the annual plan, the estimate of Rs 408 per boat was found insufficient. The Divisional Officer reports that from 1891 the grass taken for the bridge will have to be paid for, as Mr. Hearsey, the new owner of the villages that formerly supplied the material "free," demands payment, though the villagers, as before, enjoy privileges The accounts of the bridge for past four years stands at—

Service head	1887 88	1888 89	1889 90	1890 91	Increase on 1889 90	Average of four years
	Rs	Rs	Rs	Rs	Rs	Rs a p
Receipts	4 768	3 942	3 714	3 999	285	4 105 12 0
Expenditure .	3 210	4,236	3 687	3 766	79	3,724 12 0
Surplus .	1,558		27	233		381 0 0
Deficit		294				

The larger receipts are due to increased traffic in grain The expenditure includes Rs 500 paid to the district

35 *Buildings*—The debit is Rs 13,932, against Rs 14,287 last year, showing a saving of Rs 6,673 on the allotment Sickness and want of supervising agency chiefly accounts for the plans not having been worked up to

Apppendix III gives a total of 64 houses at close of year *New work* comprised construction of one rest-house, one Ranger's and two Guards' chaukis in *Gonda*, a record-house in *Gorakhpur*, a cook-house in *Pilibhit* and *Gorakhpur* at Rs 108 and Rs 241, complete set of outhouses at Bachkali, in *Bahraich*, for Rs 552 Rupees 77 were spent on temporary sheds in *Pilibhít* and *Bhira* Eight rest-houses, seven chaukis, and a small additional room to cook-house remained under construction throughout the circle sickness answering for many incompleted works In addition to usual annual repairs three rest-houses were re-thatched in *Pilibhít* at an average of Rs 129, a tiled roof substituted for a thatched one in *Gonda* at Rs 600, and a cement floor laid for Rs 90 in Gorakhpur The 1st class rest-house in *Pilibhit* Division was found to have sunk at one end, and, the District Engineer's opinion being taken on its condition, masonry buttresses were prescribed The lower floor of the Changanala house in *Kheri* was under water during the floods, but, though sunk a little, the building has escaped

damage. Three chaukis proposed in Pilibhít were not built, as, besides the sites being in village lands, it is hoped change of system in working may do away with any necessity for them. The special repairs at Rs. 100 to Mahofe outhouses were not deemed necessary this year. The *Bhira* allotment of Rs 210 was exceeded by Rs 226, chiefly on special and thorough re-construction of outhouses at Gola and Matha; without this the buildings would probably have come down before long and the resulting expenditure been very heavy. The proposed rest-house at Mulani was not commenced, but the site selected was approved of by the Conservator and gazetted under the Land Acquisition Act.

36. *Wells*—The details of these form Appendix IV, showing an increase of seven or a total of 137; expenditure was Rs. 1,600, against Rs 1,446 last year Three permanent wells were made in *Pilibhít* at Rs 130, *Bahraich* at Rs. 170, and *Gorakhpur* at Rs. 198. Five wells were in hand. The cleaning and purifying with charcoal was done in all divisions, and light thatches were put up over all wells in *Pilibhít* and *Bhira*. Ninety-five wells were cleared and repaired at rates varying from 12½ annas in Bhira and Re. 1-1-6 in *Gonda* to Rs 6 and Rs 14-4-0 in *Kheri* and *Gorakhpur*. The marked immunity from fever in *Gorakhpur* is considered as probablydue to the charcoal—two maunds—put into each well in December.

CHAPTER IV.

Yield and Working.

37. Form 54 summarized gives a five years' comparative yield as follows in solid c. ft and by agency —

Agency of removal	Annual average on five years ended 1889-90	Yield of 1889 90.	Yield of 1890-91	On 1889-90	
				Increase	Decrease
Government	11,28,498	15,80,400	22,02,357	6,21,957	..
Purchasers	12,90,796	10,90,750	10,45,851	..	44,929
Free grantees, &c	25,43,623	16,96,966	14,64,574	.	2,32,392
Total .	49,62,917	43,68,116	47,12,752	3,44,636	

"Drift" being excluded this year, the real forest yield of 1890-91, with its increase nearly 3½ lakhs c. ft., is all the more satisfactory. Careful attention was paid to sylvicultural requirements. The large increase under "Government agency," made up by Kheri, Bahraich, Gonda, and Gorakhpur, is due to unusually active demand for timber (chiefly sleepers) by the Rájputana and Bengal-North-Western Railways, and for "Fuel" by the latter, other local lines, and the general public in large towns. The decrease under "Purchasers" is counterbalanced by drift, not entered here for this year, by more departmental (in lieu of purchasers') work, in Bahraich and to dry timber being scarcer in Kheri. Imperfect data in Pilibhít and Bahraich and recurring short removals (due probably to fewer villages being burnt in Bhira and Kheri) account for the large decrease under "Free grantees, &c."

38 The three methods of felling claim the outturn of timber and fuel as follows —

Method of felling	Timber, scantlings, &c		On 1889 90		Firewood and charcoal		On 1889-90.	
	1889-90	1890 91.	Increase	Decrease.	1889-90	1890-91.	Increase.	Decrease.
Regeneration ...	24,9,070	17,1,036	.	78,034		23,482	23,482	..
Amelioration ..	23,1,642	60,4,728	3,73,086		6,37,848	14,36,028	7,98,180	.
Unclassed ...	19,02,131	15,54,688	...	4,37,443	12,57,325	9,22,790	...	3,34,535
Total ...	24,72,843	23,30,452	..	1,42,391	18,95,173	23 82,300	4,87,127	

The decrease under "Regeneration," "timber," is due to fewer asaina trees felled in Kheri, and the increase in "fuel" to coppice strip fellings being shown under this head The large advance under "Amelioration" is owing to extended operations for timber in *Kheri*, *Gonda*, and *Gorakhpur*, and for "fuel" in *Bahraich*, *Gonda*, and *Gorakhpur*, chiefly by "purchasers." The continued decline in unclassed fellings is partly owing to exclusion of drift and less removals by grantees and petty consumers

39. *Bamboos "Grazing and minor produce"* summarized from Form 55 give—

Agency	Bamboos, value				Grazing, value				Minor produce, value			
			On 1889 90				On 1889 90				On 1889 90	
	1889-90	1890 91	Increase.	Decrease	1889 90	1890-91.	Increase.	Decrease	1889-90.	1890 91.	Increase	Decrease
	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs
Government	...	..	...	...	..	...	...	...	34,944	15,674	...	19,271
Purchasers ..	217	250	33	...	45,372	50,302	4,930		47,950	61,609	13,919	..
Free grantees ...	..	...	...	..	1,720	3,917	2,197	...	12,596	12,852	256	..
Total ...	217	250	33	..	47,092	54,219	7,127	...	95,490	90,394	...	5,096

The increases on last year, made up by purchasers and free grantees on all classes of produce, is due to more grazing and better data in all divisions and extended removal of minor produce in *Bhira*, *Bahraich*, *Gonda*, and *Gorakhpur*, prompter booking of current year's fees as well as old balances from "purchasers" and better rates for "baib" grass *(Ischæmum angustifolium)* and catechu, especially in Bahraich. The falling off for "minor produce" under "Government agency" is attributable to substitution in *Pilibhit*, and *Bhira* of "baib" removal by contract or direct sales in lieu of the primitive "batái" (division of outturn) system, and difficulty in concluding arrangements with the Couper Mills and consequent delay in payment. There is a very promising future for "baib," for paper manufacture Thatching grass and catechu realized better rates and were more extensively removed than usual, and baib from *Gonda* and *Bahraich* reached Calcutta. A new departure took place in *Pilibhit* and *Bhira* by opening the hitherto rigidly closed reserves for sale of grass with a view of leaving more fodder outside, reducing inflammable material, improving tree growth, and securing income. The local demand in these remote divisions required only a limited quantity of thatching grass. Special value is attached to this produce in *Gorakhpur* and *Gonda*, Rs 17,616 having been booked in the former, giving, on the closed area, a net return of Rs. 4 an acre, while in the latter it was much sought after and fetched a high figure 12,668 maunds of baib were exploited The Boomer press set up in Bahraich for Rs 2,400 give good work A press has also been started by a Calcutta purchaser. *Bamboos* were cut only in Bahraich, and, though in less numbers than last year, commanded better prices.

1 —*Departmental operations.*

40. The outturn of 22,02,357 c ft includes 7,50,405 of *Timber* worked out to some extent in every division, except Bahraich, with an increase of 2,22,582 c. ft on last year, mainly from "Improvement' fellings in *Kheri* and "Unclassed" in *Gonda* and *Gorakhpur*. *Kheri* is far ahead with a total of 35,384 sál and 88 asaina

(terminalia tomentosa) trees giving an outturn of 4,57,114 cubic feet in 3,01,795 sleepers and scantlings. The average all round is 12·88 per tree or less than last year, no doubt owing to fewer asaina. The whole yield was removed from the forests. From previous balance and current year's sawings 40,131 sleepers were carted to Mailani, average 20 miles, and 9,360 railed on to Lucknow. Of 53,157 sleepers rafted to Shitaba, 36,433 went on to Bahramghát and 23,337 to Lakarmandi. The percentage of sleepers passed by the Divisional Officer before despatch was 74. 2,500 sál and 50 asaina felled under selection yielded 2,696 logs and 1,48,624 c. ft. 3,009 logs were rafted to Bahramghát and 43 railed to Lucknow. This is the first year of departmental scantling work in *Gonda*, and a good deal of difficulty was experienced in getting sawyers and transport. 559 asaina trees yielded 13,602 c. ft. in 9,068 sleepers : of these 6,000 left the forest. The average per tree was about 22½ c. ft. *Gorakhpur* turned out 23,798 sleepers and an increased number of poles : Rs. 2-2-0 for each passed and 14 annas for each rejected sleeper was realized. The sawing up of scantlings in the *Bhira* (Lucknow) depôt was stopped, as it is scarcely necessary for the Department todo this kind of petty work. A new agreement was entered into for supplying 73,578 sleepers to the Rájputana-Malwa Railway, making, with the previous supply of 68,000 to the Bengal-North-Western Railway and 69,000 to the Gola-Pilibhít extension, three distinct undertakings on hand. The obligations to the last named line were fulfilled and deliveries to the others pushed on.

Fuel.—The more than 14½ lakhs c. ft. against 1½ lakh last year, is made up chiefly by *Gonda* and *Gorakhpur* for the Bengal-North-Western Railway. In the former division only about half the yield is found to fall within the railway dimensions, and of such 2,83,968 cubic feet were delivered, the balance finding a ready sale at Lakarmandi and Gonda. *Gorakhpur* delivered 4,91,852 cubic feet to the railway and sold 5,18,892 at various depôts. Mr. Hill's praiseworthy efforts to do away with disposals by weight seem to have resulted favourably. Attempts in the same direction were made at the *Bhira* (Lucknow) depôt with fair success, and petty retail sales done away with. A new supply of 1,60,000 maunds (6,40,000 c. ft. stacked) of the best fuel for the Rohilkhand and Kumaun Railway was taken up in the winter (to be made from Pilibhít and Bhira), and work went on at five points in connection therewith by "improvement fellings" at four and "strips" at the fifth. The suitable material is likely to be only a fourth of the outturn, but it is hoped, with the new railway at hand, to get rid of the balance for local brickburning, distilleries, and fuel requirements in the hitherto remote markets of Hardoi, Sháhjahánpur, and Bareilly. Fuel was not railed to Lucknow from *Bhira* as there was a large stock in hand, and fair rates were obtained at Gola for local consumption and removal to Sitapur and Lakhimpur. As long as we can sell near the forests, it is scarcely necessary to do more at Lucknow than provide for the possible surplus from the *Gonda Bahraich*, and *Gorakhpur* side.

Minor produce realized Rs. 19,271 less, owing to attempts in *Pilibhít* and *Bhira* to get baib removed by contract or direct sale in lieu of by the primitive "batái" (division of outturn) system, to difficulty in coming to terms with the Couper Lucknow Mills, and to *Gonda*, with old stock in hand, not having cut any baib : as it was, we had more of this perishable product than could be sold straight off, and were fortunate in disposing to Calcutta Mills and petty local consumers. The income lost in Pilibhít went to the adjoining Tarái district, the "batái" system being in vogue there.

41. *Bahramghát Saw Mills and Depôt.*—The steam saw mills worked more economically, and without any accidents. 2,830 logs were landed ; 783 direct through by contractors at Rs. 1-5-0 each, and the balance hauled up by steam and manual power at five pies and three annas eleven pies each. Hand sawing was reduced from Rs. 17 to Rs. 13 per 100 c. ft. The outturn account for three years stands thus :—

Year	Indents balance at opening of year	Indents received during the year	Total indent	Indent executed	Indent cancelled	Total for year	Balance at close of year
	C ft	C ft	C ft	C ft	C ft	C ft	C ft
1888 89	5 511	44 553	50 064	49 238	826	42 903	6,245
1889 90 .	6 245	71 021	77 266	58 761	3,295	62,056	15 210
1890 91 .	15,210	45,484	60 695	40 151	6,605	46 756	13 939
1889 -90 Increase	8,965		.		3,310	.	
1889 -90 Decrease		25,537	16,471	18 610		15 300	1 271

The figures lead to the supposition of a general downward tendency, the indents received and executed work being far below that of 1889-90, and the latter also of 1888-89, while the cancelled indents show a steady rise

72,929 cubic feet of scantlings were converted The expenses on the mills came to—

	Rs
Pay of resident establishment, Engineer, and others	7 111
Half pay of Superintendent . .	1,200
Watering, greasing and miscellaneous charges	527
Repairs	1,819
Total ..	10 657
Add depreciation at 10 per cent on present capital value of mills, Rs 12,300	1,230
Total cost without fuel or interest	11 887

The rate per 100 cubic feet given above is on only current charges, exclusive of share of the Superintendent's pay Sawing the above outturn at the old rates would represent Rs 14,905, so in the rough the mills appear to have cleared Rs 3,018, but the fuel and interest must be also taken into account.

The depôt is central for the *Kheri*, *Bahraich*, and *Gonda* Divisions, both for river and rail transported material with a branch depôt at Lucknow railway station for *Kheri* sleepers, received by rail from Mulani and re-consigned to the Rájputana Railway. The general account shows that 23,319 sleepers were disposed of (against 28,275 last year), 5,112 of them to private individuals The mills and depôt working combined give the following result —

	1889 90		1890 91		Decrease on 1889 90	
	Quantity	Value	Quantity	Value	Cubic feet	Value
		Rs		Rs		Rs
Timber sold direct to purchasers .	198,157	2 87,184	1,48 304	1,73,966	49 853	1,13,218
Value of other receipts		870		569	...	301
Total	198 157	2,88,054	1,48,304	1,74,535	49 853	1,13 519

The decrease is due to last year's sales of old stock and abnormal requirements The usual auctions of inferior timber, rejected scantlings, offcuts, &c, brought in from six to 18 annas per cubic foot, or an advance of one to two annas on last year.

42 *Rivers and drift* —In *Kheri* the Soheli was cleared at Rs. 254 against Rs. 320 last year, and 3,089 logs and 44,504 sleepers were floated. Four boats-load of

sleepers were sent down the Sarda to compare with cost of carting to Mailani and railing thence to Lucknow; the result of the experiment will be given in 1891-92.

Drift operations—In *Bahramghát* on the Chauka, Sarda, Kauriala, Ghagra, and Sarju rivers were very successful, yielding Rs. 11,694 (against Rs. 4,992 last year and Rs. 2,591 in 1886-87) actually passed into accounts. It is expected that with proper management an annual income of Rs. 16,000 may be secured in this division alone, but the protective establishment requires strengthening, and possibly to have a separate executive officer would pay. In *Gonda*, 3,226 "pieces," containing 11,903 c. ft., were sold for Rs. 3,096-1-1. The plan of drawing out lists and selling each "nallah" by auction worked well, better prices being realized at less risk to cash. Drift work on the Great Gandak and Rapti in *Gorakhpur* has been in departmental hands for four years, and less opposition was experienced during the year under report. A charge of misappropriation was brought against us by Nepál, but the Darbár failing to produce witnesses at the hearing held at Bettiah (Bengal), the case was dismissed as mentioned in Chapter III, paragraph 19. The attention of the establishment was much diverted from their legitimate protective duties by constant appearance "at distant courts" in connection with the marked number of cases on the Bengal side. The year's transactions for the Gandak and Rapti rivers are as follows :—

River.	1889-90.			1890-91.			Remarks.
	Revenue.	Expenditure.	Surplus.	Revenue.	Expenditure.	Surplus.	
	Rs	Rs.	Rs.	Rs.	Rs.	Rs.	
Great Gandak ...	11,838	4,603	7,235	9,986	5,754	4,232	
Rapti ...	4,392	1,836	2,556	6,895	3,122	3,773	
Total ...	16,230	6,439	9,791	16,881	8,876	8,005	

The decreased surplus is due to the Nepál forests being closed and the balance of drift being very inferior, the increased expenditure to partial booking of 1889-90 figures and keep of an elephant. The purchase of an inspection boat in lieu of building a rest-house at Narainpur was approved of by Captain Wood and will, with accommodation for establishment, have to be arranged for in 1891-92.

Drift operations of the circle resulted in a closing balance of 22,385 c. ft. against an opening one of 25,256 c. ft. and annual collections of 1,29,542 c. ft.

43. *Material stock.*—The figures for this are—

Material.	At commencement of year.		At close of year.		Difference in value.		Remarks.
	Quantity.	Value.	Quantity.	Value.	For the year.	Against the year.	
	C. ft	Rs.	C. ft.	Rs.	Rs.	Rs.	
Timber ...	8,50,032	4,55,581	10,96,483	7,89,720	3,34,139	...	Includes "Drift."
Mds							
Fuel, 1,43,095...	4,55,872	27,066	4,24,259	22,102	...	4,964	
Minor produce...	...	12,802	...	7,204	...	5,598	
Total ...	13,05,904	4,95,449	15,20,742	8,19,026	3,23,577	...	

The increased balance of timber is in logs and sleepers in *Kheri* and *Gonda* and "drift" in *Bahramghát* and *Gorakhpur*. *Pilibhít*, *Bhira*, *Gonda*, and *Gorakhpur* held large stocks of "fuel," and *Pilibhít*, *Bhira*, *Bahraich*, and *Gonda* of "minor produce," almost entirely "baib" grass. The diminution in balance of "fuel" and "minor produce" is satisfactory, as, though a large stock looks well, a small one from

less outlay with prompt disposals is perhaps really better Depreciation has been allowed for and value taken at probable selling rates Firewood is shown in c. ft solid for both years instead of in maunds. All stock is in excess of that above entered, as much remained about the forests and in transit

2 —*Removals by purchasers*

44 The short removals 1,45,938 cubic feet of *timber* are due to *Kheri* showing over 41,000 cubic feet less than in 1889-90, owing to dry material becoming scarce, to departmental work in Bahraich having increased against "Purchasers" (though nearly 50 per cent more of "sál" logs were exploited by latter) and to less demand for poles in Gonda and Gorakhpur There is a slight rise in *Pilibhít*, and one of over 17,000 c ft in *Bhira*. Leasing the right to dead wood by area was started in Gonda with advantage The appreciable increase 1,01,000 c. ft in *fuel* is made up by *Pilibhít*, *Bhira*, and *Gorakhpur* by extra supply to railway brick-burners, sugar refiners, distilleries, and the general public Among the other divisions Bahraich shows a large falling off in 63,000 cubic feet, but better selling rates were obtained

Grazing —The increase of Rs 4,930 is partly due to booking of former years' balances All divisions, except Kheri (here the collections from privileged villages were delayed) and Gonda, contributed to the excess.

The increase of Rs 13,692 under "bamboos" and "minor produce" proper is satisfactory

Catechu and mahua, as well as baib and thatching grass, play a most important part in minor products and deserve close attention.

The income figures indicate the possibility of utilizing the remoter areas for something besides wood. The working out for catechu for years has reduced the stock of "khair," but with systematic exploitation and protection no doubt the species would soon again look up. During the year revenue fell off in *Kheri*, but rose elsewhere, *Kheri* contributed Rs 12,307, *Bahraich* Rs 4,158, and *Gonda* Rs. 3,547 In *Kheri* "the khair is being cleared off, and manufacture will cease in two or three years," and a similar fate may be expected elsewhere.

3 —*Removals by free grantees and rightholders.*

45. Both *timber* and fuel show 2,19,135 and 13,257 cubic feet less, this recurrent decreased removal of wood being satisfactory, as the drain on the open areas is very considerable If a regular testified to scale of actual requirements could be drawn up periodically and met by careful departmental arrangements, the result would be more conducive to maintenance of growing stock and knowledge of how the material is disposed of than is feasible now that grantees, and possibly others, can get a free permit simply for the asking at any *chauki* and time. For *timber Bhira* and *Kheri* alone show very slight increase, owing to more village fires, while all the other divisions return large decreases, due in *Bahraich* to fewer village fires and the "sál" given in recent years lasting longer than the usually conceded soft species, in *Pilibhít* to imperfect data from zamíndárs holding the permit books, and in *Gonda* to less waste in fellings To the decrease in *fuel Bahraich* alone does not contribute, and the excess of nearly 10,000 cubic feet is reported not to fully represent removals, as only cart-loads are recorded.

Grazing free is confined to *Pilibhít* and *Kheri*, and the increased Rs 2,197 value, is probably due to more careful issue of permits.

Minor produce —The small increase of Rs 256 is made up by *Bhira* and *Kheri* *Pilibhít* shows less realized, owing to fewer villages being burnt and the demand for thatching material being in proportion

It may be noted that, though the "free grants" are short of last year, we gave away in round figures 2,32,000 c ft against 32,48,000 paid for and Rs 16,769 worth of minor produce against Rs. 77,532 sold

46. *Imports and Exports* —A certain amount of "shisham," "sál," and miscellaneous wood, logs, poles, fuel, manufactured articles, together with hides, horns, &c,

passes through the *Pilibhit* forests from Nepál and private forests; very little timber, but a large quantity of "baib" grass, went from Nepál through Tulsipur (in *Gonda*); a fair number of sál and other logs were rafted out by the Rápti (some being sold near Balrámpur) and also railed from Nepálganj. The export of Nepál timber through *Gorakhpur* declined, as the forests were closed and the material salved was of inferior quality. Duty on produce rafted down the Rapti was realized for the first time, and Rs. 1,855 booked on this account.

CHAPTER V.

Financial Results.

47. The averages for five years ended March 1890 and totals for 1890-91 are—

Finance heads.	Average of five years ended 1889-90.	Figures for 1889-90.	Figures for 1890-91.	On 1889-90. Increase.	On 1889-90. Decrease.
Receipts	5,09,098	6,88,556	708,967	20,411	...
Expenditure ... A	2,84,115	3,25,403	2,91,643	...	33,820
Expenditure ... B	1,02,717	1,06,664	1,11,073	4,409	...
Total Expenditure ...	3,86,832	4,32,127	4,02,716	...	29,411
Surplus ...	2,12,861	2,56,429	3,06,251	49,822	...

The results speak for themselves and are eminently satisfactory. The surplus of Rs. 3,06,257 is not only almost half a lakh more than last year's, but the largest booked since formation of the Department in Oudh. The receipts—thanks to extensive working and better rates—are Rs. 20,411 more than in 1889-90 and the highest during many years (excepting 1887-88), while the expenditure due to general economy is nearly Rs. 29,411 less in spite of exceptional "B" charges for a weaker working power than usual. The receipts would have been still larger if more settlements for sleepers had been made and outstandings further reduced.

Revenue.—The increase is mainly from "fuel," "grazing," "minor produce" (purchasers), "drift," and "duty on foreign produce," the falling off, only nominal, on "timber" and "minor produce" (Government).

Expenditure "A."—"The only immediately unremunerative increase is against the stock sub-head A-VI for hay press and new boats, others all showing either a direct decrease or the contrary (as under "Government fuel" and drift") in a favourable proportion to income. The "*B*," excess, is made up by ncreased establishments, travelling allowance, and contingencies, especially "carriage of offices" and "sundries." There was a saving of Rs. 60,351 on the final budget allotment.

48. Under the main account heads the comparative figures fall as follows :—

Heads.	1888-89. Receipts.	1888-89. Charges	1889-90. Receipts	1889-90. Charges.	1890-91. Receipts.	1890-91. Charges.	1890-91. Surplus.	On 1889-90. Receipts.	On 1889-90. Charges.	On 1889-90. Surplus.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs	Rs.	Rs.	Rs.
I.—Departmental timber ...	3,25,267	1,49,040	4,22,765	2,65,756	4,32,805	2,34,255	1,98,550	+ 10,040	− 3,150	+ 41,541
II —Other revenue	2,14,387	78,340	2,65,701	76,735	2,76,162	96,422	1,79,750	+ 10,361	+ 9,677	− 8,306
III.—Protection	...	89,499	...	89,636	...	72,040	...	...	−17,587	...
Total ...	5,39,654	3,16,879	6,88,556	4,32,127	7,08,967	4,02,716	3,06,251	+ 20,411	...	...

There is a steady increase under both revenue heads, with fluctuating charges under all three "Departmental timber," &c, realized more than in 1889-90 with a diminished outlay and enhanced surplus, but under "other revenue" the increased income is almost counterbalanced by the expenditure resulting (contrary to in the previous year) in a deficient surplus Protection cost considerably less

49 Budget revenue and charge heads compare as follows with last year —

Heads	Revenue				Expenditure			
	1889 90	1890 91	On 1889 90 +	On 1889 90 —	1889 90.	1890 91	On 1889 90 +	On 1889 90 —
	Rs	Rs.	Rs	Rs	Rs	Rs.	Rs	Rs.
R & Ex I	4,16 908	4 32 805	15,902	.	2 41 249	2,11,110		30,[illegible]
II	2,40 851	2,37,103		3,748	12 040	10 105	..	1,935
III	20,193	26,892	6,699	...	7,096	7,887	791	[illegible]
IV		1 855	1,855	...		..	...	...
V	10,609	10,312		297				..
Ex A-VI			...	.	5 479	8 873	3,394	[illegible]
" VII				.	27 093	26 804	..	289
" VIII ..		..		.	30,465	23 978		6,487
" IX	..	.	.		2 042	2,881	839	.
				Total, A ...	3 25 463	2 91,643		33,820
B I	..	.	.	..	87,743	91,160	3,417	
" II ...	.	..	.		13 594	14 135	541	
" III ..	..	...	...	...	5,327	5,778	451	
				. Total, B	1,06 664	1 11,073	4 409	.
				Total expenditure,	4 32 127	4 02 716		29,412
				Add surplus ...	2 56 429	3 06,251	..	.
Grand Total, Revenue	6,88,556	7,08,967	20,411	Grand Total .	6 88,556	7,08,967	.	.

Receipts —Under I, more owing to settlements by railways of outstandings for sleepers and fuel and less under II, from purchasers removing less wood, III, drift shows increase owing to favourable floods, IV —This is first year of duty taken on foreign produce from Nipál, V shows a decrease from fewer refunds *Expenditure* less under I, owing to decreased sleeper work, II to saving on temporary establishments; III, more necessitated by excessive drift, VI, more for feed and keep of live-stock and purchase of machinery and tools, VII, less spent on wells, VIII, less due to short expenditure on "demarcation," plantations, and "other works", IX more for "other charges" *in Kheri.*

50 The divisional abstracts give, inclusive of drift figures —

Division.	Average of five years ended 1889-90		1889 90		1890 91				Percentage of charges for		
	Revenue	Expenditure	Revenue	Expenditure	Revenue.	Expenditure.	Surplus.	Deficit.	Five years ended 1889 90.	1889-90	1890-91.
			Rs	Rs	Rs	Rs	Rs	Rs			
Direction		22 544		22 780	142	22 626	.	22,484			
Pilibhit ...	10,424	26 409	6,401	23,224	8 153	26,034		17,881	253	303	319
Bhira	1[illegible],074	14,120	17,170	21,575	26,690	10,092	10,598	..	117	125	60
Kheri	1 44 [illegible]1	1 78 128	72,608	1,84 516	1 56,452	1 65,717		9,265	123	254	106
Bahramghat,	2,10,266	31,508	2,88,054	32 573	1 74,561	25,774	1,48 787		15	11	14
Bahraich	96,33[illegible]	42 [illegible]5	1,43,898	41,902	1,51,109	46,804	1,04,305		44	28	30
Gonda	55,907	17,330	52,821	24,6[illegible]6	46 422	31,101	18 321	..	51	47	63
Gorakhpur	91,692	54,542	1,01,549	80 762	1,42,378	68,568	73,810	.	5[illegible]	79	48
Totals	[illegible],99,69[illegible]	3,80,332	6,88,556	1,[illegible]2,127	7,08,967	4,02,716	3,06,251	..	65	63	57

The year's revenue and expenditure per acre on the circle area at end of 1890-91 comes to Rs. ·92 and Rs. ·52, the divisional figures varying from Rs. ·09 to 1·41 and Rs. ·17 to ·99. All divisions, except *Bahramghát* and *Gonda*, returned a better revenue than in 1889-90, mainly due in *Pilibhít* and *Bhira* to payments of old balances and more removal of produce, especially grass in latter; in *Kheri* to payment for previous year's sleepers; in *Bahraich* to recovery of former year's balances, increased receipts from minor produce and drift, and in *Gorakhpur* to payments for 1888-89 sleepers, increased minor produce and grazing, and duty or foreign produce. The short income in *Bahramghát* is due to less sleeper work and heavy receipts last year on account of 1887-88, and in *Gonda* to non-delivery of sleepers and fuel to the railway, for want of room, and to short sales of "baib." *Kheri* and *Bahramghát* should, however, be considered together, as the latter sells for the former and taking the revenue of both as one the *Kheri* deficit is redeemed.

Expenditure.—After apportioning Rs. 22,626 of the *Direction* Division to all divisions *Pilibhít*, *Bahraich*, and *Gonda* show increased disbursements on last year, but as a rule on remunerative heads, except *Pilibhít*, which is burdened with the whole of the divisional officer's salary and allowances and keep of elephant; part of these might reasonably, be debited to Bhira. The remaining divisions of *Bhira*, *Kheri*, *Bahramghát*, and *Gorakhpur* all worked on reduced figures, economy being especially observable in *Kheri* and *Bahramghát*.

51. *Forms* 60 *and* 61.—The outstandings of revenue fell from Rs. 18,476 to Rs. 13,345; Rs. 275-11-10 were written off; of the balance, Rs. 2,602 in *Kheri* and about Rs. 2,000 (out of Rs. 4,806) in Baraich are not expected to be realized, both items being long standing grazing dues. The contractors and disbursers' balance in favour of Department increased from Rs. 48,589 to Rs. 72,526 and till the system of working is modified is likely to remain high.

52. The year's transactions are as follows :—

		Rs
Cash surplus (Form 58)	...	3,06,251
Add increased value of stock (Forms 57, and 57 A) ...	...	3,25,606
Total	...	6,31,857
Deduct outstandings recovered on account of former years	...	5,131
Grand Total in favour of the year	...	6,26,726

CHAPTER VI.

General.

53. *District Arboriculture.*—A good deal was done in *Gorakhpur*, but the exhibit of financial success is not very marked :—

Road, garden, and year commenced.	1890-91.		Result.	Remarks.
	Receipts.	Charges.		
	Rs. a	Rs	Rs. a.	
Hatta road, 1880-81 ...	60 0	48	+12 0	Eight miles under Government, and eight under zamíndárs.
Pipraich road, 1883-84 ...	37 8	48	—10 8	
Nichlal road, 1887-88 ...	279 5	611	—331 11	About 50 miles under treatment.
Rámghar garden 1879-80,	300 0	243	+57 0	
Total ...	676 13	950	—273 3	

The eight miles of the *Hatta* road kept up by Udi Bhan Singh and Janki Parshad Singh at their own request is in a bad way, only 700 trees (and many of these dying) being found against "1,563 in excellent condition and forming almost continuous avenue" on the Government section. An increased surplus is expected as the fruit trees mature. *Pipraich* road has only about 2½ miles of fruit trees, one well cared for by Rai Durga Parshad and the remainder "utterly neglected by Wajid Ali Shah." The continued encroachment of cultivation to the detriment of the trees is again reported. Protection of the 6,600 plants on the *Nichlal* road was found difficult, owing to the excessive mileage under observation. This is only the third year of work and large outlay must be faced till the trees are thoroughly established. The *Rámgarh* garden did well; only five out of 478 are not fruit trees.

54. *Office Establishment.*—Clerks Rudr Datt (*Bhira,*) Daulat Rai (*Kheri*), Mr. Roberts (*Bharamghát*), and Kuar Bahádur (*Bahraich*) are favourably mentioned. Captain Wood recommended a bonus to the circle office head clerk Pandit Jai Datt and Daulat Rai (Kheri) for extra office (working plans) and field work respectively, but the reward was not sanctioned in either instance. References to the vernacular office branch are too meagre for much being gathered, but it may be noted that as a good deal of important work falls to it, each office ought to have at least one really efficient Head Munshi; at present there are only two permanent establishment men on Rs. 9 and Rs. 20 in *Pilibhít* and *Kheri*. One Munshi was dismissed in *Gonda*.

55. *Health.*—This has been as a rule good. A ranger in Gorakhpur, with four out of 38 Guards in Pilibhit, and 16 out of 32 in Bhira, went on sick leave. Some resignations may doubtless also be put down to sickness. Though cholera and fever carried off many workmen in *Kheri* and "sickness was prevalent throughout *Gorakhpur*," the establishment escaped. In *Gonda*, however, "there was universal illness amongst the forest establishment" in the rains.

56. *District Officers.*—The co-operation of Colonels Cowie, Grigg, and Barrow are cordially acknowledged as having tended to successful forest administration in Kheri, Bahramghát, and Gonda.

57. *Main facts, &c.*—The main facts of the year appear in Appendix V, and it is trusted that the net results in both accomplished work and income, may commend themselves favourably to Government and be considered creditable to the circle staff generally.

NAINI TAL:
The 1st August 1891.

W. SHAKESPEAR,
Offg. Conservator of Forests, Oudh Circle.

ANNUAL STATEMENTS

AND

APPENDICES.

[Form No. 49.

FOREST DEPARTMENT, NORTH WESTERN PROVINCES AND OUDH.

AREA OF RESERVED PROTECTED FORESTS AND UNCLASSED STATE FORESTS AND WASTE LANDS 1890-91.

Division or Range	Civil District or Territory	Name of Forest	Area on 1st April 1890		Added during the year	Excluded or transferred to other heads	Area on 1st March 1891		Number and date of Notification of addition or transfer	Remarks.
			Acres	Equivalent in square miles	Acres.	Acres.	Acres.	Equivalent in square miles.		
Pilibhit ...	Pilibhit	Pilibhit	97,045	152	...	* 141,076	96,903,924	151	* No $\frac{206F}{114A\ 30}$, of 28th February 1891.	Part I, *Gazette* of March 7th, 1891.
Bhira	Kheri	Bhira	96,651	151	...	* 196,314	96,453,936	151	* No. $\frac{203F}{114A\ 27}$, of 28th February 1891.	Ditto ditto.
Kheri	Do	Newa'khár	168,296	263	.	...	168,296	263		
Bahraich	Bahraich	Khairigarh								
		Motipur ..	208,021	325	† 6,132,750	* 4,998,331	209,155,416	327	† No $\frac{166F}{14A\ 29}$, of 26th February 1891	
		Bhinga							* No $\frac{169F}{14A\ 32}$, of 26th February 1891	
									* No $\frac{172F}{14A\ 35}$, of 26th February 1891	
									† Mo $\frac{175F}{14A\ 38}$, of 26th February 1891	Ditto ditto
									† No $\frac{178F}{14A\ 41}$, of 26th February 1891	
									* No $\frac{181F}{14A\ 44}$, of 26th February 1891	
Gonda	Gonda	Gonda	99,137	155	† 1,065	* 1 123,536	99,078,464	155	* No. $\frac{197F}{114A\ 21}$, of 28th February 1891	Ditto ditto
									† No $\frac{95F}{60A\ 19}$, of 7th February 1891.	No. (1) $\frac{559F}{60A\ 13}$, of 1st August 1890, (1).
Gorakhpur ...	Gorakhpur	Gorakhpur	100,556	157	..	* 127,683	100,428,320	157	† No $\frac{556F}{60A\ 10}$, of 1st August 1890	
									* No. $\frac{200F}{114A\ 24}$, of 28th February 1891.	Ditto ditto.
		Total ...	769,706	1,203	7,197,750	6,587,440	770,316,060	1,204		

NAINI TAL:
The 1st July 1891.

W SHAKESPEAR,
Offg. Conservator of Forests, Oudh Circle.

[Form No. 50.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

REGISTER OF BREACHES OF FOREST RULES DURING 1890-91.

Forest Division.		Cases pending from 1889-90.	New cases of the year.					Total cases	Disposed of during the year.						Cases pending at close of year.
			Injury to forest by fire.	Unauthorised felling or appropriation of wood and minor forest produce.	Grazing without permission, or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.		Convictions.		Acquittals.		Total.		
									Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
Pilibhít	A	...	3	...	1	...	4	4	3	5	1	11	4	16	...
	B	...	...	3	5	...	8	8	8	40	...	...	8	40	...
	C	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total		...	3	3	6	...	12	12	11	45	1	11	12	56	...
Bhira	A	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	B	...	1	8	7	...	16	16	16	59	...	...	16	59	...
	C	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total		...	1	8	7	...	16	16	16	59	...	...	16	59	...
Kheri	A	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	B	...	...	1	...	1	2	2	1	3	1	1	2	4	...
	C	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total		...	...	1	...	1	2	2	1	3	1	1	2	4	...
Bahramghát	A	...	...	10	...	12	22	22	15	18	7	8	22	26	...
	B	...	...	...	...	1	1	1	1	1	...	...	1	1	...
	C	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total		...	...	10	...	13	23	23	16	19	7	8	23	27	...

Bahraich	A ...	...	...	9	39	3	51	51	49	68	2	3	51	71	...
	B ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	C ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	9	39	3	51	51	49	68	2	3	51	71	...
Gonda	A ...	...	...	3	5	...	8	8	8	12	...	1	8	13	...
	B ...	...	...	10	15	...	25	25	25	68	...	...	25	68	...
	C ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	13	20	...	33	33	33	80	...	1	33	81	..
Gorakhpur	A ...	...	...	4	4	2	10	10	10	34	...	...	10	34	...
	B ...	...	...	27	6	8	41	41	41	75	...	...	41	75	...
	C ...	.	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	31	10	10	51	51	51	109	..	...	51	109	...
GRAND TOTAL ...	A ...	...	3	26	49	17	95	95	85	137	10	23	95	160	...
	B ...	...	1	49	33	10	93	93	92	246	1	1	93	247	...
	C ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

N B.—A. means cases taken into Court.
B. means cases disposed of under section 67 of Indian Forest Act, 1878.
C. means undetected cases.

NAINI TAL:
The 1st July 1891.

W SHAKESPEAR,
Offg. Conservator of Forests, N.-W. P. and Oudh, Oudh Circle.

[Form No. 51.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, OUDH CIRCLE.

AREA OF FOREST TRACTS PROTECTED FROM FIRE DURING THE DRY SEASON 1891 TO ACCOMPANY REPORT FOR 1890-91.

Division.	Forest tracts.	Year in which protection commenced.	Area actually protected up to 15th June 1890.	During dry season of 1891.			Cost during the season.	Remarks.
				Area attempted to be protected	Failures.	Actually protected.		
			Acres.	Acres.	Acres.	Acres.	Rs.	
Pilibhit Division ...	North Pilibhit	1880	20,588	20,545	6,951	13,594	1,401	Average cost per acre on "attempted to be" and "actually protected."
	East "							
	South-east "							
	Maina Kot "	1881	2,173	16,830	2,696	14,134		43 acres made over to railway.
	Dhanaraghát "	1886	4,642	6,369	41	6,319		
	Total ...	...	27,403	43,735	9,688	34,047	1,401	7 902 6 150 Pies.
Bhira Division ...	Marha	1877	15,924	15,930	5,117	10,813	1,156	
	Menziesgang	1885	7,072	7,114	57	7,057		
	Khareta	1885	11,252	11,256	1,316	9,940		
	Kaptaura Menziesganj	1886	7,414	7,414	3,854	3,560		
	Baraunchа	1888	3,775	4,302	250	4,052		
	Total ...	...	45,437	46,016 — 197 *45,819	10,594	35,422 —197 *35,225	1,156	* 197 acres made over to railway. 5 26 4 844 Pies.
Kheri Division ...	Dudua home block	1872	31,371	32,240	...	32,240	2,961	
	Newal Khar Sub-Division							
	Kusumbha and Mohan home block	1881	39,160	39,640	...	39,640	1,879	
	Khairigarh Sub-Division							
	Total ...	...	70,531	71,880	...	71,880	4,840	Cost per acre. 12 ·928 1·09 Pies.
Bahraich Division ...	Motipur	1878	64,960	64,960	...	64,960	1,435	
	Chakia Charda	1875-85	22,752	23,040	...	23,040	770	
	Bhinga	1875-76	69,760	69,760	...	69,760	1,073	
	Total ...	...	157,472	157,760	...	157,760	3,278	Cost per acre. 3 989 3 99 Pies.

Gonda Division ...	Sections I to IV	1880	88,900	99,137	6,164	92,973	933		
	Nawábganj	1880-91							
	Total ...	...	88,900	99,137	6,164	92,973	933	Cost per acre. 11 766 1 92 pies.	
Gorakhpur Division	Ramgarh and Tilkonia	1875	6,754	6,754	550	6,204	116		
	Nagwa		6,900	6,900	...	6,900	105		
	Sonari and Jagpur		22,282	22,282	...	22,282	233		
	Dudhai		8,600	8,600	...	8,600	233		
	Bhilampur and Banki		4,154	4,154	1,355	2,799	110		
	East Lehra		7,600	7,600	...	7,600	94		
	West Lehra		12,300	12,300	...	12,300	211		
	Bhari Baisi		6,000	6,000	...	6,000	98		
	Bhari Buban								
	Sakhwi Sissu Plantation	1886	2,180	2,180	...	2,180	...		
	Total ...	...	76,770	76,770	1,905	74,865	1,200	Cost per acre. 3 003 3 07 pies.	
	GRAND TOTAL ... 1890-91 ...	...	4,66,513	4,95,101	28,351	4,66,750	12,808	Cost per acre 5·26	4·967 pies.
	1889-90 ...	...	4,37,213	4,95,841	28,828	4,66,513	13,082	Cost per acre 5 38	
	Difference	...	+29,300	−240	−477	+237	−274		

NOTE.—This form is for the dry season, and not for the financial year, and therefore the date up to which expenditure is included must be filled in to suit the circumstances of each circle.

NAINI TAL:
The 1st July 1891.

W. SHAKESPEAR,
Offg. Conservator of Forests, N.-W. P. and Oudh, Oudh Circle.

[Form No. 52.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

AREA OF PLANTATIONS, 1890-91.

Division.	Name of Plantation.	Area in acres: On 1st April 1890	Area in acres: Added during the year.	Area in acres: Excluded during the year.	Area in acres: Area on 31st March 1891	Receipts: Of the year	Charges: Of the year	Remarks.
	Plantations.							
Bhira	Marha	...	...	...	32	...	21	
	Total ...		...	...	32	...	21	
Bahraich	Nishángara	11	...	...	11	...	...	No expenditure has been incurred during the year.
	Kam	5	...	...	5	...	...	
	Dondra	2	...	...	2	...	...	
	Ponsonbyganj	1	...	...	1	...	..	
	Total ...	19	...	...	19	...	...	
Gorakhpur	Ramgarh	303	...	...	303	...	939	
	Sonari (Madhauha)	100	...	...	100	...	98	
	bakhwi	2,180	24	...	2,204	...	1,107	
	East Lehra	40	...	...	40	..	207	
	Total ...	2,623	24	...	2,647	...	2,351	
	TOTAL, PLANTATIONS ...	2,642	24	..	2,698	...	2,372	
	Cultural Operations.							
Bhira	Marha ... . Total ...	32	...	32	...	...	...	
Kheri	Sarota sissu nursery	½	...	...	½	...	5	
	Dudua high ground	½	...	...	½	...	...	
	Dudua low ground	30	...	...	30	...	159	
	Sissu, khair and bamboos							
	Dudua forest garden	2	...	...	2	...	189	
	Total ...	33	...	...	33	...	353	

Bahraich	Experimental sowings of sál, ebony, and mahua in Compartment III, of Bhinga Block and on Raetara Plain.	5	...	5	...	...	...	No expenditure has been incurred during the year.
	Total ...	5	...	5	...	...	...	
Gonda	Ramgarh	2	...	2	...	...	32	
	Bhagwanpur							
	Nand Mahra	1	...	...	1	...		
	Total ...	3	...	2	1	...	32	
Gorakhpur	... ...	...	...	...	...	...	46	
	Total, Cultural operations ...	41	...	39	34	...	431	
	GRAND TOTAL ...	2,715	24	39	2,732	...	2,803	

NAINI TAL:
The 1st July 1891.

W SHAKESPEAR,
Offg. Conservator of Forests, N.-W. P. and Oudh, Oudh Circle.

[Form No. 54.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

OUTTURN (IN CUBIC FEET, SOLID) OF TIMBER AND FUEL DURING THE YEAR 1890-91 AND AGENCY OF EXPLOITATION.

Division.	Timber in the rough; logs.					Timber in the rough; poles.					Sawn or squared timber.					Miscellaneous.					Fuel.					Total.
	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Outturn.
PILIBHIT.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
Amelioration.											I.—Reserved Forests.															
Improvement fellings,	...	...	...	...	...	339	...	...	...	339	52	...	...	...	52	...	...	...	...	...	99,678	...	...	...	99,678	100,069
Unclassed fellings ...		...	...	[illegible]	5	...	9,769	...	127,845	137,614	...	549	...	...	549	...	511	...	1,770	2,281	...	70,636	...	52,150	122,786	263,235
Total ...	...	...	...	5	5	339	9,769	...	127,845	137,953	52	549	...	...	601	...	511	...	1,770	2,281	99,678	70,636	...	52,150	222,464	363,304
BHIRA.																										
Regeneration.																										
Coppice, clean (strips),	397	122	...	...	519	377	90	...	...	467	163	...	...	...	163	2	...	...	...	2	15,924	7,558	...	...	23,482	24,633
Amelioration.																										
Improvement fellings,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	72,390	...	...	...	72,390	72,390
Unclassed fellings ...	...	1,398	...	...	1,398	...	4,841	4,872	...	9,713	...	...	...	...	...	...	10,864	49,428	...	60,292		83,242	44,926	...	128,168	199,571
Total ...	397	1,520	...	...	1,917	377	4,931	4,872	...	10,180	163	...	...	...	163	2	10,864	49,428	...	60,294	88,314	90,800	44,926	...	224,040	296,594
KHERI.																										
Regeneration.																										
Selection fellings ...	148,624	21,261	...	...	169,885	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	169,885
Amelioration.																										
Improvement fellings,	...	...	...	...	...	...	...	...	...	...	457,115	...	...	...	457,115	...	...	...	...	...	...	...	...	...	...	457,115
Unclassed fellings ...	...	...	...	...	...	8,402	5,852	158,133	...	172,387	...	2,049	15,509	...	17,558	...	57	54,722	...	54,779	...	20,678	185,633	...	206,311	451,035
Total ...	148,624	21,261	...	...	169,885	8,402	5,852	158,133	...	172,387	457,115	2,049	15,509	...	474,673	...	57	54,722	...	54,779	...	20,678	185,633	...	206,311	1,078,085

Charcoal should be shown by its equivalent in fuel, the quantity of wood consumed in producing it being entered in cubic feet, sold.

[Form No. 54.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

OUTTURN (IN CUBIC FEET SOLID) OF TIMBER AND FUEL DURING THE YEAR 1890-91 AND AGENCY OF EXPLOITATION—(*concluded*).

Division.	Timber in the rough ; logs.					Timber in the rough ; poles.					Sawn or squared timber.					Miscellaneous.					Fuel.					Total
	Government.	Purchasers.	Free grantees.	Rightholders.	Total.	Government.	Purchasers.	Free grantees.	Rightholders.	Total.	Government.	Purchasers.	Free grantees.	Rightholders.	Total.	Government.	Purchasers.	Free grantees.	Rightholders.	Total.	Government.	Purchasers.	Free grantees.	Rightholders.	Total.	Outturn.
	C. ft.	C. ft.	C.ft.	C.ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft	C. ft.	C.ft.	C. ft.	C ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
I.—Reserved Forests.																										
BAHRAICH.																										
Amelioration.																										
Improvement fellings,	...	23,857	...	.	23,857	...	19,152	...	...	19,152	...	...	...	...	...	...	...	...	...	...	92,000	...	...	...	92,000	135,009
Unclassed fellings ...	...	170,176	881	...	171,057	...	141,013	594,221	...	735,234	...	...	...	...	...	...	2,189	...	...	2,189	...	54,901	22,920	...	77,821	986,301
Total ...	...	194,033	881	...	194,914	...	160,165	594,221	...	754,386	...	...	...	...	...	...	2,189	...	...	2,189	92,000	54,901	22,920	...	169,821	1,121,310
GONDA.																										
Amelioration.																										
Improvement fellings,	...	...	...	...	...	2,609	...	...	...	2,609	...	...	..	...	...	...	...	...	...	...	618,800	...	..	...	618,800	621,409
Unclassed fellings .	3,611	3,190	...	...	6,801	20	10,624	42,992	...	53,636	15,239	1,017	...	...	16,256	11,851	51,964	44,985	...	108,800	...	158,378	63,582	...	221,960	407,453
Total ...	3,611	3,190	...	...	6,801	2,629	10,624	42,992	...	56,245	15,239	1,017	...	...	16,256	11,851	51,964	44,985	...	108,800	618,800	158,378	63,582	...	840,760	1,028,862
GORAKHPUR.																										
Amelioration.																										
Improvement fellings,	...	...	...	...	...	63,516	...	...	...	63,516	37,763	...	...	...	37,763	...	...	...	...	...	517,876	...	...	...	517,876	619,155
Thinnings ...	...	...	...	...	..	325	...	...	...	325	...	..	...	..	...	...	...	...	...	...	35,284	...	...	...	35,284	35,609
Unclassed fellings ...	...	607	...	...	607	...	2,952	...	...	2,952	...	580	...	...	580	...	...	...	...	...	...	165,744	...	...	165,744	169,883
Total ...	...	607	...	...	607	63,841	2,952	...	...	66,793	37,763	580	...	...	38,343	...	...	...	...	..	553,160	165,744	...	...	718,904	824,647
GRAND TOTAL ...	152,632	220,611	881	5	374,129	75,588	194,293	800,218	127,845	1,197,944	510,332	4,195	15,509	...	530,036	11,853	65,585	149,135	1,770	228,343	1,451,952	561,137	317,061	52,150	2,374,742	4,712,752

Charcoal should be shown by its equivalent in fuel, the quantity of wood consumed in producing it being entered in cubic feet, solid.

DATED NAINI TAL ; *The 22nd July* 1891.

W. SHAKESPEAR,
Offg Conservator of Forests, Oudh Circle.

[Form No. 55.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

OUTTURN OF MINOR FOREST PRODUCE DURING THE YEAR 1890-91.

Division.	Description of produce.	Produce removed or utilized. By Government agency. Quantity.	By Government agency. Value.	By purchasers. Quantity.	By purchasers. Value.	By free grants. Quantity.	By free grants. Value.	By right-holders. Quantity.	By right-holders. Value.	Total. Quantity.	Total. Value.	Remarks.
	1.—Reserved Forests.		Rs.		Rs.		Rs.		Rs.		Rs.	
Pitthora.	Grazing dues	...	...	...	799	...	...	...	3,109	...	3,908	
	Grasses	Mds. 125	...	...	1,102	...	...	...	590	Mds 125	1,692	
	Honey and wax	...	6	...	100	...	...	...	...	...	106	
	Wild medicines	...	4	...	251	...	...	...	...	...	255	
	Sál and other leaves	...	...	...	79	...	...	...	...	...	79	
	Hides and horns	...	...	...	63	...	...	...	...	...	63	
	Wild fruits and flowers	...	...	...	1	...	...	...	...	...	1	
	Miscellaneous	...	...	...	206	...	...	...	18	...	224	
	Total ... Grazing ...	...	...	...	799	...	...	...	3,109	...	3,908	
	Total ... Minor produce	Mds. 125	10	...	1,802	...	...	...	608	Mds 125	2,420	
	GRAND TOTAL	Mds. 125	10	...	2,601	...	...	...	3,717	Mds. 125	6,328	
Bhitha.	Grazing	...	...	...	2,503	...	...	...	...	...	2,503	
	1. Baib grass	Mds. 4,790	4,998	...	...	...	...	...	...	4,790	...	
	(Bahangi loads)	...	...	17	11	...	...	...	...	17	5,009	
	(Head „)	...	...	21						21		
	2 Kâns grass	Mds. 71	53	...	4	394	12	...	...	71	69	
	Head loads	...	...	67						461		
	3. Thatching grass											
	4 bullock carts	...	...	56	465	25	447	...	...	81	912	
	2 „ „	...	...	1,479		1,950				3,429		
	Head loads	...	...	7		69				96		
	4. Sink grass „	...	...	2	1	...	...	...	...	2	1	
	(Maunda)	...	...	1						1		
	5. Panga grass (head loads)	...	...	1,885	58	...	...	...	...	1,885	58	
	6. Reed grass (2 bullock) carts	...	...	162	63	256	96	...	...	418	159	
	Head loads	...	...	72		6				78		
	7. Aonla leaves head loads	...	...	2	12	251	8	...	...	2	20	
	(Bahangi loads)	...	...	6						6		
	8. Withies (2 bullock) carts	...	...	15						15		
	Head loads	...	...	138						339	...	

BHURA	9 Manure (4 bullock carts)	...	...	...	19	3	...	.	...	..	19	2
	(2 ") ..		.	...	3						3	
	10 Thorns "		.	.	...	.	1	1	..	...	1	1
	11 Creepers (head loads)		.			..	31				31	
	12 Castor seeds .	Mds		.	1	2	..	..	.	..	1	2
	13 Bahira	...	" 2	2					..		2	2
	14 Bhilawan ..											
	15 Mahwa .. .	"	41	31	28	11			...		69	42
	16 Honey and wax ..	"	6	46	..	...	...		.	..	6	46
	17 Pipal .	... "	3	148			...		.	..	3	148
	18 Catechu (earthern pots) .		.	.	3 687	3,126		.	..	.	3 687	3,126
	19 Hides (contract) . .			...	Contract	152		...	...	..	Contract	234
	(No) ..		163	82	6						169	
	Total	Mds	4,913	5,360	30	3,908	2,983	564	..	..	4,943	9,832
		Nos	163		7,644						10,790	
	GRAND TOTAL ..		4,913	5,390	30	6,411	2,983	564	..		4,943	12,335
			163		7 644						10,790	
KHERI.	Grazing dues		...	..	...	8,793	.	808	..	...	..	9,601
	Baib grass .. .		..		285	19	42	5	..	...	327	24
	Thatching grass		.	..	Mds. 145	52	Mds. 58,438	1 168	..		Mds 58,583	1,220
	Reed do .. .	.	.	...	.	..	37 273	1,652	.	...	37,273	1,652
	Khagar do. .. .	.		...	.	...	35,727	1,196	..	.	35,727	1,196
	Kuss do ...	...	...		.	.	117	12	.	...	117	12
	Batwa do.	.	.		...		10 988	673	.	..	10,988	673
	Narkul do	...	.		...	.	4,660	110	..	.	4,660	110
	Munj do	.	.		..		2,889	360	.	...	2,889	360
	Sink . .	...	.		..		178	5	..	..	178	5
	Lac			..	6	83	..	.	...	...	6	83
	Moraia leaves .			..	32	1	...	.	..	..	32	1
	Khair pots . .	...	..	.	1,5409	12,307	.	...		.	15,409	12,307
	Shell . . .	.	.		2	4	.	..	.	...	2	4
	Lime . ..	...		..	16	6	.		...	...	16	6
	Asna bark		.	.	2	4		...	.	...	2	4
	Miscellaneous . .			.	.	2	.	2	.	...	...	4
	Lease of thatching grass	.	.	...		53	..	.	..	..	...	53
	Do of honey and wax				.	215	..	.	...		..	215
	Do. of hides . .				..	530	.	.	...	...	..	530
	Total . Grazing	..	...	.	..	8,793		808	..	...		9,601
	Minor produce	...				13,276		5,183			...	18,459
	GRAND TOTAL .					22,069		5,991			...	28,060
BAIT RAIGOR	Grazing dues .. .	...	..	...	116,119	19,410	..		...	...	116,119	19,410
	Bamboos .. .				2,671	250	..	.	..	..	2,671	250
	Baib grass ..		5,908	5,877	.	60	...		.	...	5,908	5,937
	Khas do	.	.		..	35	..	.	...	...	...	35
	Carried over	...	..	.	...	...	...	.	..	...	...	...

[Form No. 55.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

OUTTURN OF MINOR FOREST PRODUCE DURING THE YEAR 1890-91—(*continued*).

Division.	Description of produce.	Produce removed or utilized. By Government agency. Quantity.	By Government agency. Value.	By purchasers. Quantity.	By purchasers. Value.	By free grants. Quantity.	By free grants. Value.	By right-holders. Quantity.	By right-holders. Value.	Total. Quantity.	Total. Value.	Remarks.
	I.—Reserved Forests—(*continued*).		Rs.		Rs		Rs.		Rs.		Rs.	
	Brought forward ...	5,908	5,877	1,18,790	19,755	...	...	...	...	1,24,698	25,632	
BAHRAICH—(*concluded*).	Long grass	...	...	...	1,077	...	3,466	...	...	...	4,543	
	Sink do.	...	...	...	35	...	...	...	...	...	35	
	Kusrawat	...	...	...	9	...	...	...	...	...	9	
	Munj	Mds. 21	21	...	29	...	...	...	...	21	50	
	Narkul	...	...	...	50	...	...	...	...	...	50	
	Phua	...	3	...	779	...	...	...	...	...	782	
	Canes	No. 12,100	110	...	2	...	...	...	...	12,100	112	
	Jhao	...	...	...	20	...	...	...	...	...	20	
	Mahua flowers	Mds. 600	302	...	2,644	...	...	...	...	600	2,946	
	Wild fruit	...	...	...	172	...	...	...	...	...	172	
	Pipal	...	...	...	25	...	...	...	...	...	25	
	Pipal roots	...	...	...	9	...	...	...	...	...	9	
	Bones, horns, and hides	...	...	...	1,595	...	...	...	...	...	1,595	
	Cowdung	...	...	...	13	...	...	...	...	...	13	
	Catechu	...	...	...	4,158	...	...	...	...	...	4,158	
	Wax and honey	...	...	...	392	...	...	...	...	...	392	
	Total ... Grazing ...	...	...	116,119	19,410	...	...	...	...	116,119	19,410	
	Total ... Bamboos ...	...	...	2,671	250	...	...	...	...	2,671	250	
	Total ... Minor produce ...	No. 12,100 Mds. 6,529	6,313	...	11,104	...	3,466	...	...	12,100 Mds. 6,529	20,883	
	GRAND TOTAL ...	No 12,100 Mds. 6,529	6,313	118,790	30,764	...	3,466	...	...	130,890 Mds. 6,529	40,543	
	Grazing dues	...	...	...	6,658	...	...	...	...	...	6,658	
	Baib grass	Mds. 1,685	600	424	39	...	...	...	...	2,109	639	
	Thatching grass	...	...	227,835	5,714	43,442	698	...	...	271,277	6,412	

GONDA.	Reed grass	...	...	...	...	3,056	249	100	10	...	...	3,156	259
	Narkul	...	...	...	...	...	31	...	...	...	...	...	31
	Sink	...	...	...	...	110	11	...	...	...	...	110	11
	Banda	...	...	...	...	446	14	...	...	...	...	446	14
	Asna bark	...	...	...	...	90	9	...	...	...	...	90	9
	Khair	...	...	...	...	1,182	3,547	...	...	...	...	1,182	3,547
	Hide	...	...	...	...	...	183	...	...	...	...	...	183
	Honey and wax	...	...	...	...	...	55	...	...	...	...	...	55
	Horns	...	...	...	...	...	95	...	...	...	...	...	95
	Fodder	...	...	...	...	...	...	46,250	2,312	...	...	46,250	2,312
	Mahua flower	...	...	..	Mds. 496	579	451	150	...	..	...	947	729
	Lime	...	...	...	5,464	2,811	1,656	165	...	...	...	7,320	2,973
	Munj	...	...	...	...	...	...	...	176	11	...	176	11
	Total	...	Grazing	...	...	...	...	6,658	...	...	...	...	6,658
			Minor produce	...	7,645	3,990	235,450	10,262	89,968	3,031	...	333,063	17,283
	GRAND TOTAL			...	7,645	3,990	235,450	16,920	89,968	3,031	...	333,063	23,941
GORAKHPUR.	Grazing dues	...	...	...	...	...	52,995	12,139	...	...	...	52,995	12,139
	Grass	...	...	...	...	...	...	17,616	...	...	...	...	17,616
	Ratwa grass	...	...	...	...	...	...	30	...	...	...	...	30
	Kus "	...	...	..	...	...	...	46	...	...	...	...	46
	Patore "	...	...	...	...	...	...	140	...	...	...	...	140
	Reeds	...	..	...	...	...	...	146	...	...	...	...	146
	Sál leaves	...	...	...	...	...	...	31	...	...	...	...	31
	Agai leaves	...	...	...	...	...	...	1	...	...	...	...	1
	Wild fruit	...	...	...	...	...	...	34	...	...	...	...	34
	Plum	...	...	...	...	...	...	6	...	...	...	...	6
	Orange	...	...	..	...	...	...	52	...	...	...	...	52
	Kasaiya	...	...	...	...	...	...	161	...	...	...	...	161
	Sabai	...	...	...	...	...	...	70	...	...	...	...	70
	Kusrant	...	...	..	...	...	...	28	...	...	...	...	28
	Palwat	...	...	...	...	...	...	57	...	...	...	...	57
	Hide and horns	...	...	...	...	...	...	575	...	...	...	...	575
	Honey	...	...	...	...	...	...	23	...	...	...	...	23
	Munj	...	...	...	...	...	...	18	...	...	...	...	18
	Outstanding	...	...	...	...	...	..	380	...	...	...	...	380
	Miscellaneous	...	...	...	...	...	...	1,843	...	...	...	...	1,843
	Total	...	Grazing	...	...	...	52,995	12,139	...	...	...	52,995	12,139
			Minor produce	...	...	...	...	21,257	...	...	...	...	21,257
	GRAND TOTAL			...	...	...	52,995	33,396	...	...	...	52,995	33,396

[Form No. 55.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

OUTTURN OF MINOR FOREST PRODUCE DURING THE YEAR 1890-91—(*concluded*).

Division.	Description of produce.	Produce removed or utilized.										Remarks.
		By Government agency.		By purchasers.		By free grants.		By right-holders.		Total.		
		Quantity	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
	I.—Reserved Forests—(*concluded*).		Rs.		Rs.		Rs.		Rs.		Rs.	
	Brought forward ...	...	...	...	...	...	...	...	...	...	...	
	GRAND TOTAL .. Bamboos ...	...	...	2,671	250	...	...	...	...	2,671	250	
	Grazing ...	...	...	169,114	50,302	...	808	...	3,109	169,114	54,219	
	Minor produce ...	No. 12,263 Mds. 19,212	15,673	7,644 235,480	61,609	2,983 89,968	12,244	... ..	608	22,890 344,660	90,134	
	II.—Protected Forests.											
	Nil.											
	III.—Unclassed State Forests and Waste Lands.											
	Nil.											
	GRAND TOTAL ... 1890-91 ...	...	15,673	...	1,12,161	...	13,052	...	3,717	...	1,44,603	
	1889-90 ...	...	34,944	...	93,539	...	11,707	...	2,609	..	1,42,799	
	Difference	...	—19,271	...	+18,622	...	+1,345	...	+1,108	...	+1,804	

NAINI TAL:
The 5th July 1891.

W. SHAKESPEAR,
Conservator of Forests, N.-W. P. and Oudh, Oudh Circle.

[Form No. 56.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPÔTS, OR SOLD LOCALLY, DURING THE YEAR 1890-91.

Particulars.	Number or quantity.	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubit feet.
BALANCES AT COMMENCEMENT OF THE YEAR.				
Pilibhît Division.				
Ridge poles	16	4		
Fuel	Mds. 28,325	141,125		
Charcoal	" 2	8	16	141,137
Minor produce	" 1,712	...	Mds. 30,039	
Bhira Division.				
Siasu logs	12	334		
Tun "	8	184		
Sál ballies and pieces	384	1,359		
Fuel	Mds. 76,360	292,953		
Charcoal	" 606	2,431	404	297,261
Minor produce	" 10,592	...	Mds. 87,560	
Kheri Division.				
Sál logs and pieces	4,797	229,053		
Asna " "	1,275	46,093		
Haldu " "	140	10,921		
Sál sleepers	85,528	131,530		
Asna "	110,748	166,373		
Sál scantling	7,782	6,916		
Asna "	578	484		
Sál signal posts	12	160		
Large boats	59	...		
Dagonts	530	...		
Miscellaneous timber	5,869	8,087	217,338	600,617
Bahramghât Division.				
Sál logs	736	24,423		
Siasu logs	1	16		
Asna "	130	7,272		
Haldu "	2	133		
Sál scantlings	8,038	3,614		

Particulars.	Number or quantity.	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubic feet.
DISPOSALS.				
To purchaser from sale depôts.				
Sál logs	98	3,286		
Asna logs	281	17,339		
Haldu "	2	133		
Sál scantlings	58,642 / Mds 331	61,951		
Asna "	1,586	1,464		
Haldu "	20	16		
Siasu "	221	43		
Deodár "	94	44		
Sál sleepers	13,319	19,978		
Asna "	10,000	15,000		
Sál botas	341	4,240		
Asna "	43	578		
Siasu	7	29		
Miscellaneous bondas	269 / Mds. 201	...		
Sál pieces	8 / Mds. 1,052	...		
Deodár pieces	1	...		
Sál blank	146 / Mds. 1,487	69		
" offcuts	5,398 / " 6,230	...		
Asna "	64 / " 187	...		
Haldu "	2	9		
Siasu "	" 21	...		
Mango wood	" 3	...		
Firewood	" 796	...	90.741	124,179
Draft timber	" 8	...	Mds. 10,317	
To purchaser from Forest Depôts.				
Sál logs	304	3,112		
Asna "	1	19		

[Form No. 56.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPÔTS, OR SOLD LOCALLY, DURING THE YEAR 1890-91—(*continued*).

Particulars.	Number or quantity.	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubic feet.
BALANCE AT COMMENCEMENT OF THE YEAR—(*concluded*).				
Bahramghát Division—(concluded).				
Sissu scantlings	318	121		
Asna "	157	47		
Haldu "	20	16		
Sal sleepers	4,045	6,052		
" botas	266	2,686		
Asna "	23	208		
Sissu "	12	50		
Sál offcuts	2,156 Mds. 4,006	... ...		
Sissu "	144 Mds. 54	... ...		
Asna "	36 Mds. 38	... ...		
Haldu "	2	9		
Large boat	1	...	16,077	44,647
Firewood	Mds. 12,310	...	Mds. 17,008	
Drift timber	1,989	16,282	1,989	16,282
Lucknow Depôts.				
Asna logs	6	261		
Sál sleepers	1,119	1,678		
Sissu scantlings	16	9		
Asna "	...	6		
Sál planks	219	...		
Sál offcuts	41 Mds. 1,323	... ...		
Sissu "	Mds. 21	...		
Sál "	466 Mds. 110	... ...	1,648	1,954
Fire wood	Mds. 796	...	Mds. 2,469	

Particulars.	Number or quantity.	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubic feet.
To purchaser from Forest Depôts—(concluded).				
Sissu logs	11	295		
Sál beams	52	156		
Tun logs	8	205		
Sál sleepers	65,964	99,219		
Asna "	28,048	42,078		
Sál pieces	5,794	20,895		
Asna "	1,829	1,099		
Sál ballies	14	55		
" signals	10	124		
" planks	363	163		
" poles	9,450	15,850		
Asna "	4,939	10,064		
Jamun poles	384	300		
Sál scantlings	7,580	6,466		
Asna "	771	859		
Sál slabs	1,127	..		
" offcuts	435	217		
Jamun "	4,356	4,173		
Asna "	60	155		
Rafter	292	292		
Sissu pieces	16	64		
Jamun "	303	16,665		
Sal piles	18	382		
Miscellaneous timber	22	273		
Large boats	19	...		
Drift timber	7,754 Mds. 29,356	127,890		
Baib grass	" 17,639	...		
Minor produce	14,702 " 8,022	... ...		
Firewood	" 3,57,130	568,930	154,656	922,386
Charcoal	...	2,482	Mds. 4,12,147	

Bahraich Division.					
Sál logs		37	1,652		
„ poles		5,429	62,248		
„ offcuts		5,875	10,961		
„ sleepers		1,587	2,281		
Miscellaneus poles		6	134		
Mongries		2	...		
Sál planks		1	...	12,937	77,276
Gonda Division.					
Sál pieces		363	1,000		
Asna „		19	95		
„ bark	Mds.	19	...		
Jamun logs		27	108		
Mahua logs		90	984		
Dhau Dhura		167	82		
Sál offcuts		364	123		
Jamun „		450	225		
Dhau „		15	60		
Sál bark	Mds.	9	...		
„ poles		253	405		
„ piles		22	457		
Asna scantlirgs		541	628		
Sál „		38	23		
Fuel	Mds	15,092	...		
Minor prodnce	„	10	...	2,349	
Baib	„	835	...	Mds. 15,965	4,200
Gorakhpur Division.					
Sál poles, &c.		6,761	17,303		
Asna „		6,547	10,317		
Sál logs		300	3,000		
„ offcuts		4,164	4,359		
„ sleepers		23,446	35,167		
„ pieces		805	1,610		
„ scantlings		518	258		
Bijai sál pieces		1	4		
Sissu pieces		4	16		
Jamun poles and pieces		6,040	22,156		
„ poles fit for fuel		...	11		
Firewood maunds		9,602	19,203		
Drift timber of Great Gaulak ...		1,813	5,967	51,213	122,530
	Mds.	10			
Drift timber of Rapti ...		815	3,159	Mds. 9,683	
	Mds.	71			
Total Balance ... No. ...		...	...	303,971	1,305,905
Total Balance ... Mds. ...		...	...	162,724	

To purchasers locally.					
Sál beams	150	300			
„ pieces	1,261	1,589			
Sissu „	14	20			
Dhau „	1	16			
Tekui „	11	128			
Asna „	79	29			
Jamun „	5	40			
Sál slabs	14	24			
Planks	67	202			
Sál poles	3,166	2,262			
„ ridge poles	106	57			
Asna poles	201	804			
Miscellaneous pieces	142	286			
Drift timber	3,098	11,851	8,395		
Fuel	80	290,604	145,123	Mds. 3,08,212	
	Mds. 1,45,123				
To conversion in Depôts.					
Sál logs	2,809	1,18,944			
Asna „	1,992	20,760			
Sissu „	4	77			
Deodár „	2	108			
Mahua „	90	984			
Dhau Dhura	167	82			
Sál crooked trees	35,384	4,55,521			
Asna „	88	1,594			
Sál scantlings	5,835	11,760			
Asna „	71	78			
Sál botas	573	5,321			
Asna „	1	41			
Sissu „	1	5			
Deodár „	1	53			
Babul thamras	15	32			
Asna offcuts	132	690			
Sissu „	9	13			
Deodár „	10	47			
Sál „	8,376	26,637	55,560	643,513	
	Mds 3,081				
Firewood	Mds. 65	766	Mds. 3,146		
To lost or written off.					
Tun logs	...	14			
Ballies and pieces	250	836			
Saplings	16	4			
Miscellaneous bhondas	3,081	5,008			
Large boats	3	...			
Baib grass	Mds. 102	...			
Minor produce	Mds. 226	...			
	No. 8				
Sál sleepers	190	285			

[Form No. 56.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPÔTS, OR SOLD LOCALLY, DURING THE YEAR 1890-91—(*continued*).

Particulars.	Number or quantity.	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubic feet.
RECEIPTS.				
From the Forests in Sale Depôts.				
Sál logs	2,739	121,907		
Asna "	313	18,740		
Sál sleepers	14,955	22,433		
Asna "	21,478	32,217	39,742	195,297
Miscellaneous bondas	257 / Mds. 201	...	Mds. 201	
Received from the forests in depôts other than Sale Depôts.				
Sál logs and pieces	2,968	118,263		
Sissu logs and pieces	31	202		
Asna " " "	85	4,230		
Haldu " " "	...	...		
Sal crooked trees	35,384	455,521		
Asna " "	88	1,594		
Sal sleepers	353	530		
Asna "	...	...		
Sál offcuts	211	394		
Asna "	554	823		
Sál scantlings	730	675		
Asna "	461	491		
Sál beams	52	156		
" poles	14,992	28,767		
Asna "	1,231	1,945		
Miscellaneous timber	5,041	9,035		
Drift timber	194	2,440		
Drift timber ... Gandak ...	No. 2,104 / Mds. 18,993	68,500		
Drift timber ... Rápti ...	No. 10,705 / Mds. 10,518	47,473		
Drift timber ... Bahrámghát	No. 2,584	15,464		

Particulars.	Number or quantity.	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubic feet.
To lost or written off—(concluded).				
Sál and Asna bark extract	Mds. 11	..		
Drift timber	8,136	17,961		
Firewood	Mds. 24,620	43,383	11,684	67,852
Charcoal	...	361	Mds. 24,959	
Used Departmentally.				
Sál logs	184	7,091		
Asna "	10	100		
Sissu "	15	150		
Sál scantlings	4,132	483		
Asna "	290	135		
Sissu "	207	122		
Planks "	250	52		
Rafters	38	38		
Sál pieces	179	3,273		
Sissu "	4	16		
Sál offcuts	3,592 / Mds. 19,466	...		
Sissu "	164 / Mds. 64	...		
Asna "	139	269		
Jamun "	12	12		
Sál piles	2	39		
Lime	Mds. 186	...		
Charcoal	" 2	8	9,737	13,001
Drift timber	519	1,213	Mds. 19,718	
To transfer.				
Sál logs	2,739	121,907		
Asna "	343	20,297		
Sál sleepers	15,101	22,651		
Asna "	21,478	32,217		
Sál scantlings	11,409 / Mds. 1,046	7,294		

Firewood	Mds 3,31,954	484,376			
Charcoal	„ ...	412	92,556		
Minor produce	„ 14,788	...	Mds.3,83,929		1,241,291
	„ 21,464				
Received from forests and sold locally.					
Sál pieces	1,108	1,283			
Sissu „	14	20			
Sál slabs	14	24			
„ poles	3,425	2,625			
„ beams	150	300			
„ planks	18	9			
„ offcuts	1	1			
„ harsa	48	192			
„ rafters	335	335			
Asna poles	201	804			
Miscellaneous pieces	238	499			
Minor produce	Mds. 125	...			
Firewood	„ 1,45,123	390,274	8,650		M. 408,217
Drift timber	3,098	11,851	145,248		
Received by conversion in Depôts.					
Sál logs and pieces	575				
	Mds. 1,246	20,200			
Asna „ „	2,580	31,312			
Sál sleepers	301,795	454,235			
Asna „	9,068	13,602			
Sál scantlings	No. 73,429				
	Mds. 1,171	78,401			
Asna „	2,624	3,262			
Sissu „	95	36			
Sál signal posts	4	115			
„ slabs	1,127	...			
„ planks	408				
	Mds. 2,003	...			
Deodár scantlings	140	60			
Babul „	250	16			
Sál botas	848	6,875			
Asna „	21	411			
Deodár botas	1	53			
Sál offcuts	15,252				
	Mds. 24,214	26,719			
Asna „	160				
	Mds. 149	690			
Sissu „	29				
	Mds. 23	...			
Pleodar	10				
	Mds. 1	47	408,674		636,077
Doughs	258	43	Mds. 28,907		

Asna „	321	523		
Haldu „	6	5		
Sál pieces	5			
	1,043	...		
„ plank	8			
	Mds. 1,521	...		
„ botas	99	385		
„ offcuts	3,040			
	Mds. 3,742	...		
Miscellaneous bhondas	514			
	Mds. 201	514		
Baib grass	„ 135	...	55,068	
Fuel	...	33,801	Mds. 7,688	239,634
Total disposal ... No. ...	...	...	385,761	
Total disposal ... Mds. ...	...	...	6,23,098	2,318,777
BALANCE AT CLOSE OF THE YEAR.				
Pilibhít Division.				
Bidge pole and rafters	6	6		
Fuel	...	75,160		
Baib grass	Mds. 859	...	6	
Mior produce	„ 5	...	Mds. 864	75,166
Bhira Division.				
Sal ballies	146	505		
Asna „	1	2		
Pieces	25	233		
Fuel	...	104,625		
Baib grass	Mds. 4,586	...	250	
Minor produce	79			
	Mds. 78	...	Mds. 4,665	105,365
Kheri Division.				
Sál logs and pieces	4,857	232,271		
Asna „ „	1,253	43,921		
Haldu „ „	140	10,921		
Sál sleepers	332,947	503,928		
Asna „	61,222	92,084		
Sál scantlings	1,272	2,296		
Asna „	1,271	2,078		
Sál signals	6	151		
„ Miscellaneous bhondas	7,402	11,967		
Drift sissu logs	18	252		
Large boats	37	...		
Dugouts	530	...	410,955	899,869

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE. [Form No. 56.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BOUGHT TO SALE DEPÔTS, OR SOLD LOCALLY, DURING THE YEAR 1890-91—(*concluded*).

Particulars.	Number or quantity.	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubic feet
By transfer.				
Asna logs	35	1,557		
Sál sleepers	2,351	3,526		
„ scantlings	11,409	7,294		
Asna „	Mds. 1,046			
Haldu „	321	523		
Sál planks	6	5		
„ pieces	8	...		
„ offcuts	Mds. 1,521			
Miscellaneous bondas	5	...		
Sál botas	Mds. 1,043			
Fuel	3,040	...		
	Mds. 3,742			
	257	...		
	Mds 201			
	99	335	17,531	47,131
	...	Mds. 33,891	Mds. 7,550	
Miscellaneous receipts.				
Sál scantlings	1,612	5,188	...	
„ pieces, &c., ...	Mds. 115	...	...	
Miscellaneous timber	No. 27			
	Mds 9	32	...	
Drift timber	21	288	1,920	5,602
Confiscated timber	Mds. 260	94	Mds. 119	
	Md. 1			
Total Receipts ... { Numbers ...	...	...	569,073	25,33,615
{ Maunds ...	...	...	564,857	
GRAND TOTAL ... { Numbers ...	...	..	873,044	38,39,519
{ Maunds ...	...	...	727,581	

Particulars.	Number or quantity.	Cubic feet.	Total of each head. Number or quantity.	Total of each head. Cubic feet.
BALANCE AT CLOSE OF THE YEAR—(*concluded*).				
Bahrámghát Division.				
Sál logs	568	24,100		
Asna „	116	5,607		
Sál scantlings	11,864	10,414		
Asna „	190	112		
Sissu „	1	1		
Deodár „	46	16		
Babool „	250	16		
Sál pieces	1			
	Mds 53	...		
„ sleepers	6,644	9,966		
Asna „	11,478	17,217		
Sál offcuts	173			
	Mds. 193	...		
„ planks	Mds. 1	...	31,329	67,449
Large boats	1	...	Mds. 250	
Drift timber	999	6,108	999	6,108
Lucknow Depôt.				
Sál scantlings	2,669	1,509		
Asna „	Mds. 840			
Sál sleepers	22	50		
„ offcuts	146	219		
	376			
	1,362	...		
„ pieces	1			
	Mds. 231	...	3,216	
„ planks	2			
	Mds. 690	...	Mds. 3,123	1,778

								Bahraich Division.					
								Sál logs	33	1,563			
								„ offcuts	5,875	10,961			
								„ sleepers	582	774			
								„ poles	4,811	63,883			
								Asna „	4	123	11,305		
								Fuel, Lucknow and Bahramghát	Mds. 488	976	Mds. 488	78,280	
								Gonda Division.					
								Sál poles	771	1.542			
								Asna pieces	5	25			
								„ offcuts	364	399			
								Sál „	140	300			
								Jaman logs	27	108			
								„ offcuts	85	43			
								Dhau „	15	60			
								Sál piles	2	46			
								„ scantlings	53	41			
								Asna scantlings	207	202			
								„ logs	445	2905			
								„ sleepers	9,068	13,602			
								Baib	Mds. 808	...			
								Minor produce	Mds. 2,110	...	11.182		
								Fuel	Mds. 59,600	119,200	Mds. 62,518	138,473	
								Gorakhpur Division.					
...	...	Numbers	...			873,044	3,839,519	Sál poles	5,789	8,258			
...	...	Maunds	...			7,27,581		„ pieces	1,771	1,771			
								„ planks	103	25			
								„ offcuts	96	96			
								„ sleepers	275	412			
								„ door frames	39	169			
								„ sugar mill pot, &c.	706	614			
								„ scantlings	41	20			
								„ logs	1	10			
								„ patri	54	6			
								Asna poles	1,026	1,180			
								Sissu pieces	4	4			
								Jamun pieces	5,151	5,151			
								Miscellaneous poles	209	215			
								Drift timber of Gandak	998	3,350			
								Drift timber of Rapti	1,778	2,675	18,041		
									Mds. 231			88,644	
								Firewood	Mds. 32,344	64,688	Mds. 32,575		
								Total Balance ... Numbers ...	...	...	4,87,283	1,461,132	
								Maunds ...	...	...	1,04,483		
GRAND TOTAL	...	Numbers	...	...	...	873,044	3,839,519	GRAND TOTAL ... Numbers ...	...	...	873,044	3,779,909	
		Maunds	...	...	...	7,27,581		Maunds ...	...	...	7,27,581		

NOTE.—The opening fuel figures are in stacked and the closing in solid cubic feet.

NAINI TAL :
The 5th July 1891.

W. SHAKESPEAR,
Offg. Conservator of Forests, N.-W. P. and Oudh, Oudh Circle.

[Form No. 57.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, OUDH CIRCLE.

ABSTRACT SHOWING THE VALUE OF TIMBER AND OTHER PRODUCE AT SALE DEPÔTS FOR THE YEAR 1890-91.

Description of timber and other produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in value.		Remarks.
	Number.	Cubic feet.	Value.	Number.	Cubic feet.	Value.	In favour of the year.	Against the year.	
			SALE DEPÔTS.						
Timber.			Rs.			Rs.	Rs.	Rs.	
Logs	875	32,105	11,048	681	29,707	20,878	8,930	...	
Sleepers and scantlings	13,703	11,543	9,038	33,310	39,520	28,452	19,419	...	
Poles and saplings ... Mds.	219	..	219	...	...	...	...	219	
Offcuts, salbs and pieces ...	3,147 6,152	2,953	4,615	553 Mds. 3,373	...	1,562	...	3,053	
Total, timber ... No. Mds.	17,725 6,371	46,601	25,815	34,544 3,373	69,227	50,892	25,077	...	
Drift collections	1,980	16,282	...	999	6,108	1,522	1,522	...	
Firewood ... Mds.	13,106	...	2,210	...	...	...	...	2,210	
GRAND TOTAL ... No. Mds.	19,714 19,477	62,883	28,025	35,543 3,373	75,335	52,414	24,389	...	
			FOREST DEPÔTS.						
Logs and pieces	15,860	327,725	1,36,241	13,978	299,016	1,29,724	...	6,517	
Sleepers and scantlings ...	231,582	345,430	2,34,184	407,039	615,608	5,67,228	3,33,094	...	
Poles and saplings	22,727	89,292	24,524	12,707	75,686	13,122	...	11,403	
Offcuts, slabs, &c.	10,871	15,728	711	6,375	11,857	667	...	44	
Miscellaneous timber... ...	...	...	...	7,402	11,967	748	748	...	
Boats and canoes	580	...	33,565	...	...	...	...	33,565	
Manufactured articles ...	...	...	...	604	735	197	748	...	
Drift collection	2,628 Mds.76	8,974	591	2,794 Mds. 231	6,277	1,725	1,134	...	
Total ... No. Mds.	284,257 76	787,149	4,29,766	451,094 Mds. 231	1,021,148	7,13,410	2,83,444	...	
Firewood ... Mds. Charcoal ... "	129,379 610	... ...	24,438 418	...	364,649	22,102	...	2,754	
Total ...	129,989	...	24,856	...	368,649	22,102	...	2,754	
Minor produce	13,182	...	12,802	8,447 No. 78	...	7,204	...	5,598	
GRAND TOTAL ... No. Mds.	284,257 143,247	787,149	4,67,424	451,172 8,678	1,384,790	7,42,716	2,75,292	...	
	ABSTRACT OF FORM No. 57, SALE AND FOREST DEPÔTS.								
Timber ... No. Mds.	303,971 6,447	850,032	4,55,581	486,033	10,95,741	7,65,627	7,20,046	...	
Manufactured articles ...	...	...	...	604	735	197	197	...	
Total ... No. Mds.	303,971 6,447	850,032	4,55,581	4,86,637 3,604	1,096,476	7,65,824	3,10,243	...	
Firewood and charcoal Mds.	143,005	...	27,066	...	364,649	22,102	...	4,964	
Minor produce ... "	13,182	...	12,802	8,447 No. 78	...	7,204	...	5,598	
GRAND TOTAL ... No. Mds	303,971 162,724	850,032	4,95,449	426,715 12,051	1,461,132	7,95,130	2,99,681	...	

N.B.—The opening fuel figures are in stacked and the closing in solid cubic feet.

NAINI TAL:
Dated the 31st July 1891.

W. SHAKESPEAR,
Offg. Conservator of Forests, N.-W. P. and Oudh, Oudh Circle.

[Form No. 57A.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, OUDH CIRCLE.

ABSTRACT SHOWING THE VALUE OF LIVE AND DEAD STOCK AND BUILDINGS FOR THE YEAR 1890-91.

Description of timber and other produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in value.		Remarks.
	No.	C. ft.	Value.	No.	C. ft.	Value.	In favour of the year.	Against the year.	
			Rs.			Rs.	Rs.	Rs.	
Direction Division—									
Dead Stock	74	...	466	74	...	446	...	20	
Pilibhit Division—									
Live stock	1	...	1,500	1	...	1,425	...	75	
Dead stock	1,684	...	1,341	1,736	...	1,176	...	165	
Buildings	8	...	8,000	8	...	7,600	...	400	
Total ...	1,693	...	10,841	1,745	.	10,201	...	640	
Bhira Division—									
Dead stock	859	...	1,948	872	...	2,088	328	179	
Buildings	11	...	9,860	11	...	9,662	...	198	
Total ...	870	..	11,808	883	...	11,750	..	49	
Kheri Division—									
Live stock	4	...	3,895	4	...	3,703	...	192	
Dead stock	40,927	...	7,203	37,178	...	32,313	25,110	209	
Buildings	12	...	35,145	12	...	34,445	...	700	
Total ...	40,943	...	46,243	37,194	...	70,461	24,009	...	
Bahramghat Division—									
Live stock	10	...	105	10	...	103	...	2	
Dead stock	1,042	...	44,189	858	...	40,994	...	3,195	
Buildings	2	...	9,500	2	...	9,310	...	190	
Total ...	1,054	...	53,794	870	...	50,407	.	3,387	
Bahraich Division—									
Live stock	1	...	2,600	1	...	2,470	...	130	
Dead stock	2,127	...	2,834	2,110	...	4,186	2,187	835	
Buildings	32	...	43,433	32	...	41,565	...	1,868	
Total ...	2,160	...	48,867	2,143		48,221	1,352	...	
Gonda Division—									
Dead stock	598	...	1,579	541	...	1,848	269	80	
Buildings	3	...	6,500	5	...	13,095	6,595	130	
Total ...	601	...	8,079	546		14,943	6,653	...	
Gorakhpur Division—									
Live stock	2	...	2,400	2	...	2,340	...	60	
Dead stock	51,255	...	3,434	51,270	...	3,903	470	170	
Buildings	11	...	11,830	11	...	11,594	...	236	
Total ...	51,268	...	17,664	51,283		17,837	4	...	
GRAND TOTAL ...	98,663	..	1,97,762	94,738	...	2,24,266	25,011	...	
Abstract of the Circle.									
Live stock	18	...	10,500	18	...	10,041	23,511	459	
Dead stock	98,566	...	62,994	94,639	...	86,954	...	...	
Buildings	79	...	1,24,268	81	...	1,27,271	2,878	...	
Total ..	98,663	...	1,97,762	94,738	...	2,24,266	25,925	...	

Entries in column "in favour of year" relate to new work and purchases.

NAINI TAL,
The 20th July 1891.

W. SHAKESPEAR,
Offg. Conservator of Forests, N.-W. P. and Oudh. Oudh Circle.

[Form No. 58.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, OUDH CIRCLE.

SUMMARY OF REVENUE OF THE DIFFERENT DIVISIONS DURING 1889-90.

Budget Heads.	Direction.	Kheri Division.	Bhira Division.	Bahramghát Division.	Bahraich Division.	Gonda Division.	Gorakhpur Division.	Pilibhít Division.	Total.
RECEIPTS	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a p
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—									
a Timber	...	1,24,492 12 1	916 2 11	1,62,272 7 5	4,651 11 10	1,623 15 3	51,823 3 4	36 8 0	3,45,816 12 10
b. Firewood and charcoal	...	...	7,449 1 2	...	3,391 10 9	11,203 3 3	41,583 14 0	1,318 9 5	64,946 6 7
c. Bamboos	...	...	...	...	...	...	...	...	...
d. Sandal wood	...	...	...	...	...	...	...	...	...
e. Grass and other minor produce	...	...	11,226 15 9	...	6,813 5 6	3,989 15 8	0 9 0	11 0 7	22,041 14 6
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—									
a Timber	...	6,795 4 8	853 9 1	...	1,00,648 2 2	10,807 10 11	1,627 2 0	1,520 0 10	1,22,251 13 8
b. Firewood and charcoal	...	280 4 0	535 1 1	...	1,196 3 0	1,370 0 0	1,685 9 1	1,705 13 6	6,772 14 8
c. Bamboos	...	...	...	...	250 4 6	...	...	...	250 4 6
d. Grazing and fodder grass	...	8,793 8 7	2,503 15 6	...	19,409 13 5	6,658 5 4	12,140 2 9	798 5 0	50,305 2 7
e. Other minor produce	...	11,742 10 4	2,586 2 6	...	11,104 7 0	10,262 3 1	19,415 6 2	2,412 2 1	57,522 15 2
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE,	...	171 11 0	139 8 0	11,693 12 5	1,693 3 7	2,926 2 3	10,033 10 0	233 11 4	26,891 10 7
IV.—REVENUE FROM FOREST NOT MANAGED BY GOVERNMENT—									
a. Duty on foreign timber and other forest produce ...	...	...	...	...	...	...	1,855 0 0	...	1,855 0 0
b. Revenue from shared and private forests	...	...	...	...	...	...	...	...	...
V.—MISCELLANEOUS—									
a. Fines and forfeitures	...	50 0 0	2 0 0	...	83 8 0	346 10 0	354 4 0	0 8 0	836 14 0
b. Refunds	142 4 0	48 15 6	...	25 5 4	4 8 0	9 10 4	15 8 0	0 0 9	246 3 11
c. Other sources	...	4,076 9 4	477 0 10	569 10 3	1,921 11 0	224 7 5	1,844 5 3	114 13 4	9,228 9 5
TOTAL, RECEIPTS ...	142 4 0	1,56,451 11 6	26,689 8 10	1,74,561 3 5	1,51,168 8 9	49,422 3 6	1,42,278 9 7	18,152 8 10	7,08,966 10 5

A.—CONSERVANCY AND WORKS.									
I.—Timber and other produce removed from the forests by Government Agency—									
a. Timber	...	1,29,276 0 5	131 4 10	16,987 12 5	902 14 11	3,550 15 11	8,891 10 1	...	1,89,740 10 7
b. Firewood and charcoal	...	...	5,875 8 2	...	2,685 0 1	7,162 7 4	19,790 13 6	693 14 0	36,207 11 1
c. Bamboos	...	...	...	...	...	...	...	...	...
d. Sandal wood	...	...	...	...	...	...	...	...	...
e. Grass and other minor produce	...	...	2,285 14 6	...	9,854 5 9	3,026 14 7	...	...	15,167 2 10
II.—Timber and other produce removed from the forests by consumers or purchasers.	...	1,672 2 5	1,596 15 4	...	1,788 13 8	1,962 6 9	1,477 12 4	1,606 10 4	10,104 12 10
III.—Drift and waif wood and confiscated forest produce	...	...	...	1,807 11 1	...	77 4 0	5,999 4 3	3 0 0	7,887 3 4
IV.—Revenue from forests not managed by Government—									
a. Duty on foreign timber and other forest produce ...	...	...	...	...	...	...	...	...	...
b. Revenue from shared and private forests	...	...	...	...	...	...	...	...	...
V.—Rent of leased forests and payments to shareholders in forests managed by Government.									
VI.—Live stock, stores, tools and plant—									
a. Purchase of cattle	...	...	...	...	...	...	...	...	...
b. Feed and keep of cattle	...	1,783 11 8	...	650 10 1	580 13 7	71 0 4	639 13 7	532 6 4	4,258 7 7
c. Purchase of stores, tools and plants	...	131 4 5	55 12 0	1,211 4 5	2,303 8 10	359 0 8	543 14 0	9 4 0	4,614 0 6
VII.—Communications and Buildings—									
a. Roads and bridges	...	5,722 8 3	566 15 3	22 12 3	2,502 5 0	1,050 15 3	693 3 2	712 10 0	11,271 6 1
b. Buildings	...	1,577 1 9	533 11 9	347 7 3	1,746 3 2	3,818 7 5	5,008 0 7	841 7 5	13,932 7 4
c. Others works	...	356 5 1	21 4 3	...	758 4 0	111 14 10	148 9 6	203 9 3	1,599 14 11
VIII.—Demarcation, improvement, and extension of forests—									
a. Demarcation	...	...	4 2 0	...	524 6 7	345 12 0	43 4 9	15 6 0	932 15 4
b. Compensation for land and rights	...	...	...	...	...	...	18 4 9	...	18 4 9
c. Surveys and working plans	...	46 9 0	1 8 0	1 2 0	160 0 0	...	...	...	209 3 0
d. Sowing and planting	...	353 9 3	21 6 9	...	...	32 3 8	2,396 1 4	...	2,803 5 7
e. Protection from fire	...	3,807 13 5	1,382 5 4	...	3,405 11 1	816 12 6	1,617 2 9	1,602 0 4	12,631 13 5
f. Other works	...	69 9 10	452 2 9	...	1,911 4 3	293 2 1	4,359 5 6	297 7 10	7,383 0 3
IX.—Miscellaneous—									
a. Refunds	...	26 4 0	...	...	...	...	...	...	26 4 0
b. Law charges	...	...	15 3 3	4 4 0	...	1 0 0	74 2 6	4 1 0	28 7 9
c. Other charges	...	1,403 13 2	57 3 0	80 4 9	914 15 6	154 9 0	87 15 9	57 6 0	2,756 3 2
Total A.—Conservancy and works ...	...	1,46,226 12 9	13,001 2 2	21,113 4 4	30,038 10 5	22,834 14 4	53,849 6 11	6,579 3 5	2,91,693 6 4

[Form No. 58.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, OUDH CIRCLE.

SUMMARY OF EXPENDITURE OF THE DIFFERENT DIVISIONS DURING 1890-91—(*concluded*).

Budget Heads.	Direction.	Kheri Division.	Bhira Division.	Bahramghát Division.	Bahraich Division.	Gonda Division.	Gorakhpur Division.	Pilibhít Division.	Total.
B.—ESTABLISHMENT.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
I.—SALARIES—									
a. Conservators	1,800 0 0	...	...	...	...	...	...	...	18,000 0 0
b. Superior officers	...	7,978 2 7	...	2,400 0 0	7,050 0 0	3,000 0 0	8,850 0 0	14,719 13 4	43,997 15 11
c. Subordinate forest and depôt establishments ...	...	4,343 9 0	1,945 14 6	74 0 0	5,345 11 4	2,815 3 6	4,286 10 11	1,503 1 3	20,314 2 6
d. Office establishments	1,814 3 2	3,076 14 4	406 5 5	840 0 0	924 5 2	417 15 2	598 4 0	719 8 0	8,797 7 3
e Deputation and special allowances	...	50 0 0	...	...	...	...	...	...	50 0 0
II.—TRAVELLING ALLOWANCES—									
a. Conservators	1,538 11 6	...	...	...	...	...	...	...	1,538 11 6
b. Superior officers	...	1,450 0 6	...	743 0 2	1,335 13 0	729 6 6	2,005 10 0	1,859 1 0	8,122 15 2
c. Subordinate forest and depôt establishments ...	...	800 12 0	220 15 7	1 12 0	760 4 8	448 15 0	298 10 8	...	2,531 5 11
d. Office establishments...	393 11 5	586 8 0	148 7 8	82 2 0	268 9 4	128 4 5	64 6 4	270 8 1	1,942 4 3
III.—CONTINGENCIES—									
a. Stationery	2 10 0	16 2 2	4 11 6	22 5 0	15 0 0	10 0 0	8 1 6	7 10 0	86 8 2
b. Carriage of tents and records	196 2 3	106 0 0	96 13 3	...	266 3 0	158 3 6	93 9 0	91 11 8	1,008 10 8
c. Rents, rates, and taxes	212 0 0	41 7 3	104 0 0	...	0 8 6	100 0 0	100 0 0	104 0 0	661 15 9
d, Pay of police guards	...	232 12 10	...	187 15 6	120 0 0	116 8 0	43 8 0	71 12 0	772 8 4
e. Official postage	203 11 6	109 13 9	97 2 6	170 1 9	84 2 6	98 1 6	169 14 0	54 8 6	987 8 0
f. Sundries	264 10 4	698 4 1	67 1 2	139 0 11	594 11 10	243 8 8	200 4 2	53 3 9	2,260 12 11
TOTAL B.—ESTABLISHMENTS ...	22,625 12 2	19,490 1 6	3,091 7 7	4,660 5 4	16,765 5 4	8,266 2 3	16,718 14 7	19,454 13 7	11,072 14 4
GRAND TOTAL OF EXPENDITURE ...	22,625 12 2	1,65,716 14 3	16,092 9 9	25,773 9 8	46,803 15 9	31,101 0 7	68,568 5 8	26,034 1 0	4,02,716 4 8

CALCUTTA:
The 23rd June 1891.

J. C. BOSE,
Assistant Comptroller-General Forests.

[Form No. 59.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

ACCOUNT CURRENT FOR THE YEAR 1890-91.

Dr.

	Rs. a. p.	Rs. a. p.
To Cash Balance	...	448 10 6
„ *VIII—Assessed—*		
Income Tax—Deductions from salaries	...	1,731 14 2
„ *Revenue as per Annual Summary Form No* 58	...	7,08,966 10 5
„ *Service Funds—*		
Civil Fund—Ordinary Bengal	...	...
Ditto Additional do.	...	...
Military Fund, Bengal	...	...
Ditto, Madras	...	...
Ditto, Orphan Fund, Bengal	...	...
Uncovenanted Service Family Pension Fund, Bengal ...	456 8 0	...
General Family Pension Fund	...	...
Hindu Family Annuity Fund	...	...
		456 8 0
„ *Deposits*	...	580 6 5
„ *Forests Cash Remittances, Local—*		
Forest cheques drawn	4,24,314 7 7	...
Inter-divisional transfers	23,365 7 10	4,47,679 15 5
„ *Advances recoverable*	...	4,81,167 12 7
„ *Suspense*	...	...
„ *Account Current (other Governments)—*		
Remittances from Government of India	6,838 11 10	...
Ditto ditto Bengal	5,078 8 0	11,917 3 10
„ *Inter-Departmental Transfer—*		
Public Works Department State Railways	...	...
Oudh and Rohilkhand Railways	60 0 0	...
Ordinary Branches	263 15 3	...
Military Department	...	...
Civil Department—		
Jail	55 3 6	...
Mathematical Instrument and Survey Department ...	123 14 0	...
Miscellaneous	326 3 0	829 3 9
Total ...	...	16,53,778 5 1

Cr.

	Rs a. p.	Rs. a. p.
By Expenditure as per Annual Summary Form No. 58 ...	...	4,02,716 4 8
„ *Deposits*	...	498 9 5
„ *Forests Cash Remittances, Local—*		
Remittances to Treasuries	5,10,971 7 7	...
Inter-divisional Transfers	24,643 0 1	5,35,614 7 8
„ *Advances Recoverable*	...	5,05,104 15 6
„ *Suspense*	...	8 10 0
„ *Account Current (other Government)—*		
Remittances to the Government of India	0 6 6	...
Ditto ditto Bengal	3,765 0 2	...
Ditto ditto Panjáb	10,886 11 11	14,652 2 7
„ *Inter-Department Transfers—*		
Public Works Department State Railways	...	...
Rajputána-Malwa Railway ... Rs. 15,356 0 0	...	...
North-Western Railway Panjáb section. „ 2,289 1 11	...	...
Bengal North-Western Railway ... „ 44,618 14 11	...	...
Rohilkhand and Kumaun Railway ... „ 1,10,000 0 0	...	...
Ordinary Branches ... ... „ 19,186 12 7	1,91,450 13 5	...
Military Department	...	...
Civil Department—		
Jails ... ... Rs. 3,695 11 7	...	...
Miscellaneous .. ... „ 6 3 8	3,701 15 3	...
		1,95,152 12 8
Cash Balance	...	30 6 7
Total	...	16,53,778 5 1

CALCUTTA:
The 23rd June 1891.

J. C. BOSE,
Assistant Comptroller-General (Forests).

[Form No. 60.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

REVENUE RECEIVED AND OUTSTANDINGS ON ACCOUNT OF REVENUE DURING 1890-91.

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realised during year.	Balance due to the Department at end of year.	Remarks.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Direction ...	Miscellaneous revenue	...	142 0 0	142 0 0	142 0 0	...	
Pilibhít ...	Timber, firewood, grazing, and other minor produce.	192 15 1	8,111 12 1	8,304 11 2	*112 2 4 8,152 8 10	40 0 0	* Rs 112-2-4 written off, *vide* Local Government No. $\frac{230\text{-F}}{116\text{-A}-2}$ and No. $\frac{265\text{-F}}{119\text{-A}-2}$ of 12th and 19th April 1890 respectively.
Bhira ...	Ditto ditto ...	395 2 4	27,936 5 6	28,331 7 10	†26,853 2 4	1,478 5 6	† Includes Rs. 163-9-6 written off by Local Government No. $\frac{265\text{-F}}{119\text{-A}-2}$ and No. $\frac{69\text{-F}}{119\text{-A}-2}$ of 19th April 1890 and 5th February 1891 respectively, of the balance Rs. 1,135-11-0 was realized in April 1891.
Kheri ...	Ditto ditto ...	2,854 6 6	1,56,454 11 6	1,59,309 2 0	1,56,451 11 6	2,857 6 6	
Bahramghát ...	Ditto ditto ...	6,152 8 8	1,68,459 5 4	1,74,611 14 0	1,74,561 3 5	50 10 7	
Bahraich ...	Ditto ditto ...	4,516 11 4	1,51,458 2 8	1,55,974 14 0	1,51,168 8 9	4,806 5 3	
Gonda ...	Ditto ditto ..	963 8 0	49,725 4 10	50,688 12 10	49,422 3 6	1,266 9 4	
Gorakhpur ...	Ditto ditto ...	3,401 0 3	1,41,823 7 6	1,45,224 7 9	1,42,378 9 7	2,845 14 2	
	Total ...	18,476 4 2	7,04,411 1 5	7,22,587 5 7	7,09,242 2 3	13,345 3 4	

NAINI TAL:
The 1st July 1891.

W. SHAKESPEAR,
Offg. Conservator of Forests, N.-W. P. and Oudh, Oudh Circle.

[Form No. 61

FOREST DEPARTMENT, N W P AND OUDH, OUDH CIRCLE

OUTSTANDINGS AND LIABILITIES ON ACCOUNT OF CONTRACTORS AND DISBURSERS FOR 1890-91.

Division	Department debtor			Department creditor			Balance due	
	At commencement of year	Recoveries in cash and value of supplies and work done during the year	At close of year	At commencement of year	Payments made during year	At close of year	To Department (outstandings)	By Department (liabilities).
	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p.
Direction ..		991 4 10	991 4 10	11 11 6	996 8 9	1 008 4 3	16 15 5	
Kheri .		2,81,071 6 0	2,81,071 6 6	19,378 7 11	3,03,103 15 4	3,22,482 7 3	40,511 0 10	0 0 1
Bhira		15,920 13 1	15,920 13 1	1,806 0 5	15,073 3 0	16,879 3 5	958 6 4	.
Bahramghát,		9,701 3 9	9,701 3 9	406 6 11	10,553 2 8	10,959 9 7	1,258 5 10	..
Bahraich	0 5 9	54,453 6 9	54,453 12 6	4,008 1 3	55,090 7 4	59,098 8 7	4 645 1 10	0 5 9
Gonda	.	36,842 4 11	36 842 4 11	8,057 6 1	36,207 12 10	44,265 2 11	7422 14 0	
Gorakhpur,	..	71,364 1 9	71,364 1 9	14,636 5 4	73,212 4 11	87,848 10 3	16,484 8 6	.
Pilibhit ...	.	9,923 3 0	9,923 3 0	284 1 7	10,867 8 8	11,151 10 8	1,228 7 3	.
Total .	0 5 9	4,81,167 12 7	4,81,168 2 4	48,588 9 0	5,05,104 15 6	5,53,693 8 6	72,525 12 0	0 5 10

CALCUTTA
The 23rd June 1891

J C BOSE,
Asst Comptroller General (Forests)

[Form No. 62.

FINANCIAL RESULTS OF THE YEAR 1890-91.

Division	Timber and other produce removed from the forest by Government Agency		Other revenue		Formation, protection and improvement of forests	Total		Remarks
	Receipts	Charges	Receipts	Charges	Charges	Receipts	Charges	
	Rs	Rs	Rs	Rs	Rs	Rs.	Rs	
Pilibhit	1,366	694	6,787	13,774	14,079	8,153	28 547	Direction Division charges amounting to Rs 22 626, distributed as follows, amongst Divisions—
Bhira	19,502	8,293	7,098	5,024	5,289	26,090	18,606	
Kheri Bahramghát,	2,86,765	1,69,404	44,247	13,510	16,120	3,31,012	1,99,034	Rs
Bahraich	14,857	13,442	136,312	23,090	15,300	1,51,169	51,832	Pilibhit 2 514 Bhira .. 2,514 Kheri 5,028 Bahramghát 2,514 Bahraich 5 028 Gonda 2 514 Gorakhpur 2,514
Gonda ..	16,817	13,740	32,005	11,778	8,097	49,422	33,615	
Gorakhpur,	93,408	28,682	48,071	29,236	13,164	1,42,379	71,082	
Direction	...		142		..	142		Total 22,626
Total .	4,32,805	2,34,255	2,76,162	96,412	72,049	7,08,967	4 02,716	

NAINI TAL
The 5th July 1891

W SHAKESPEAR,
Offg Conservator of Forests, N-W. P. and Oudh, Oudh Circle

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

SHOWING RESULT OF GIRTH MEASUREMENTS OF "SÁL" IN SELECTED PLOTS.

Division and plot.	Area of plot in acres.	Number of specimens.	Last girth. Average per tree. Feet.	Last girth. Average per tree. Inch.	Present girth. Average per tree. Feet.	Present girth. Average per tree. Inch.	Increment in inches. Average per tree.	Remarks.
Pilibhit Division.								
Gehbi	½ acre	27	2	2 $\frac{408}{27}$	2	4 $\frac{125}{27}$	1·345	On two years' growth ended March 1891.
Karriaghat	½ "	25	1	10 $\frac{302}{25}$	2	0 $\frac{325}{25}$	2·057	
Mahofe	½ "	66	1	4 $\frac{49}{66}$	1	6 $\frac{83}{66}$	2·032	
Kali Larr	2 "	125	1	5 $\frac{1699}{125}$	1	7 $\frac{188}{125}$	1 244	On six months' growth ended June 1891.
Bhira Division.								
Marha	1 acre	36	1	10 $\frac{319}{576}$	1	11 $\frac{31}{376}$	·5	June to December 1890.
Do.	½ "	6	2	3 $\frac{1}{48}$	2	3 $\frac{39}{48}$	·791	June 1890 to March 1891.
Bargad	½ "	12	1	10 $\frac{50}{96}$	1	11 $\frac{22}{96}$	·708	Ditto ditto.
Kishanpur	½ "	14	2	6 $\frac{46}{224}$	2	6 $\frac{169}{224}$	·549	Ditto ditto.
Kheri Division.								
Plot No. 4	2 acre	196	2	3 $\frac{101}{196}$	2	4 $\frac{767}{1568}$	·971	March 1890 to March 1891.
Do. " 2...	½ "	18	2	7 $\frac{61}{72}$	2	8 $\frac{39}{72}$	·694	Ditto ditto.
Do. " 1...	½ "	20	2	7 $\frac{43}{80}$	2	8 ¼	·587	Ditto ditto.
Forty 2nd class trees	...	28	5	4 $\frac{27}{224}$	5	5 $\frac{42}{224}$	1·66	Ditto ditto.
Plot No. 3	½ "	28	2	8 $\frac{215}{224}$	2	9 $\frac{17}{28}$	·6[illegible]	Ditto ditto.

NAINI TAL,
The 31st July 1891.

W. SHAKESPEAR,
Offg. Conservator of Forests, Oudh Circle.

FOREST DEPARTMENT, N.-W. PROVINCES AND OUDH, OUDH CIRCLE.

ABSTRACT SHOWING ROADS, FIRE LINES, TO THE END OF MARCH 1891.

Description of lines and roads.	Pilibhít.		Bhira.		Kheri.		Bahramghát.		Bahraich.		Gonda.		Gorakhpur.		Total.		Remarks.
	Miles.	Furlongs.	Miles.	Furlongs.	Miles.	Furlongs.	Miles.	Furlongs.	Miles.	Furlongs.	Miles.	Furlongs.	Miles.	Furlongs.	Miles.	Furlongs.	
Main roads 100′ wide	...	...	...	...	...	...	...	...	...	...	9	2	...	...	9	2	
" " 50′ "	...	...	...	...	...	...	...	...	...	...	...	...	7	...	7	...	
" " 45′ "	...	...	...	...	...	...	...	...	23	1	...	...	...	...	23	1	
" " 40′ "	...	...	...	...	...	...	...	...	...	...	25	...	...	...	25	...	
" " 30′ "	...	...	6	4	...	...	...	...	56	4	40	...	13	5	116	5	
" " 20′ to 40′ "	...	...	23	...	...	...	...	...	...	...	22	½	...	...	45	½	
" " 20′ "	...	...	...	...	17	4	...	...	32	1	13	7½	8	...	71	4½	
Cart " 18′ "	...	...	...	...	39	4	...	...	...	...	...	...	...	...	39	4	
" " 15′ "	...	...	109	6½	214	2½	...	...	237	6	61	4	40	...	823	4½	
" " 12′ "	160	2	...	...	...	...	...	5	...	...	...	...	...	...	...	5	
Path " 10′ "	...	...	...	...	18	3	...	1	...	...	1	1	...	...	19	5	
" " 8′ "	54	2½	36	...	...	...	...	...	...	...	...	...	...	...	90	2½	
Export " 6′ "	3	7	...	...	...	...	...	...	...	...	18	3	...	...	22	2	
Inspection paths	...	...	55	4½	...	...	...	...	...	...	...	...	...	...	55	4½	
Export roads 8′ wide and under	...	...	...	...	...	...	...	...	...	...	10′	...	...	...	10	...	
Total ... 1890-91	218	3½	230	7	289	5½	...	6	349	4	201	2	68	5	1,359	1	
Total ... 1889-90	216	2	226	1½	289	1	...	6	344	7	185	4½	59	2	1,321	7½	
New roads during 1890-91	2	1½	4	5½	...	4½	...	...	4	5	15	5½	9	3	37	1½	

NAINI TAL:
The 1st July 1891.

W. SHAKESPEAR,
Offg. Conservator of Forests, N.-W. P. and Oudh, Oudh Circle.

[Appendix III.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, OUDH CIRCLE.

LIST OF BUILDINGS UP TO END OF 1890-91.

Description of houses.	Pilibhít.	Bhira.	Kheri.	Bahramghát	Bahraich.	Gonda.	Gorakhpur.	Total.	Remarks.
1st class double storyed ...	1	2	6	...	3	2	...	[illegible]	
" " single " ...	"	...	1	2	5	...	1	9	
2nd " double " ...	...	...	5	...	...	1	...	6	
" " single " ...	...	...	...	...	...	...	9	9	
3rd " double " ...	...	...	...	...	...	...	1	1	
" " single " ...	7	6	...	1	9	2	...	25	
Total ... 1890-91 ...	8	8	12	3	17	5	11	64	
Total ... 1889-90 ...	8	8	12	3	17	4	11	63	
New houses during 1890-91 ...	...	...	...	...	...	1	...	1	

[Appendix IV.

LIST OF WELLS UP TO THE END OF 1890-91.

Division.	Description of wells. Masonry pucka.	Katcha.	Wooden.	Total.	Remarks.
Pilibhít	16	8	...	24	
Bhira	20	5	1	26	
Kheri	42	...	1	43	
Bahramghát	3	..	...	3	
Bahraich	23	...	2	25	
Gonda	5	...	...	5	
Gorakhpur	11	...	...	11	
Total	120	13	4	137	

NAINI TAL:
The 5th July 1891.

W. SHAKESPEAR,
Offg. Conservator of Forests, N.-W. P. and Oudh, Oudh Circle.

APPENDIX V.

FOREST DEPARTMENT, NORTH-WESTERN PROVINCES AND OUDH, OUDH CIRCLE.

The main facts of the year's work may be summarized as follows as per G. O. No. $\frac{642}{845\text{-}5}$, *dated* 10*th October* 1888 :—

Numbers.			1890-91.	1889-90.	Increase.	Decrease.
1	Green trees felled	No.	718,141	384,948	333,193	...
2	Yield in timber and fuel, green and dry ...	c. ft.	4,712,752	2,116,497	2,596,255	...
3	Yield of timber, including timber from dry trees.	"	23,30,452	2,450,113	...	119,661
4	Value of above	Rs.	6,53,430	3,89,131	2,64,299	...
5	Yield of green timber	c. ft.	1,944,067	2,032,786	...	88,719
6	Value of above	Rs	4,54,955	3,20,885	1,34,070	...
7	Yield of dry timber	c. ft.	386,385	417,327	...	30,942
8	Value of above	Rs.	1,98,475	68,246	1,30,229	...
9	Yield of green timber removed by departmental agency.	c. ft.	750,405	490,241	260,164	...
10	Value of above	Rs.	3,11,487	1,78,263	1,33,224	...
11	Yield of green timber removed by exporters,	c. ft.	220,865	360,106	...	139,241
12	Value of above	Rs.	86,665	79,342	7,323	...
13	Yield of green timber removed by free grantees and right-holders.	c. ft.	972,797	1,182,439	...	209,642
14	Value of above	Rs.	56,803	63,280	...	6,477
15	Yield of dry timber removed by exporters...	c. ft.	263,779	285,268	...	21,489
16	Value of above	Rs.	1,61,587	59,449	1,02,138	...
17	Yield of dry timber removed by free grantees and right-holders.	c. ft.	122,606	132,059	...	9,453
18	Value of above	Rs.	36,888	8,797	28,091	...
19	Yield of firewood and charcoal	c. ft.	2,382,300	1,895,173	487,127	...
20	Value of above	Rs.	78,009	73,187	4,822	...
21	Yield of fuel and charcoal removed by departmental agency.	c. ft.	1,451,952	1,052,577	399,375	...
22	Value of above	Rs.	68,104	63,667	4 437	...
23	Yield of fuel and charcoal removed by exporters.	c. ft.	561,137	460,128	101,009	...
24	Value of above	Rs.	6,858	6,243	615	...
25	Yield of fuel and charcoal by free grantees and right-holders.	c. ft.	369,211	382,468	...	13,257
26	Value of above	Rs.	3,047	3,277	...	230
27	Timber sold by departmental agency ...	c. ft.	223,496	171,101	...	147,605
28	Value of above	Rs.	1,83,545	70,818	1,12,727	...
29	Timber sold direct to purchasers ...	c. ft.	484,684	630,622	...	145,938
30	Value of above	Rs.	1,17,867	1,37,078	...	19,211
31	Fuel sold by departmental agency ...	c. ft.	1,097,531	662,316	435,215	...
32	Value of above	Rs.	64,946	49,963	14,983	...
33	Fuel sold to purchasers	c. ft.	561,137	460,128	101,009	...
34	Value of above	Rs.	6,773	8,322	...	1,549
35	Bamboos	scores	2,671	31,452	...	28,781
36	Value of above	Rs.	250	217	33	...
37	Minor produce and grazing	"	1,44,603	1,09,733	34,870	...
38	Value of other receipts	"	10,312	9,807	505	...
39	Yield per square mile in cubic feet of timber and fuel.	c. ft.	3,914	3,631	283	...
40	Value of above per square mile	Rs.	607	482	125	...
41	Gross receipt per square mile	"	588	572	16	...
42	Net receipt per square mile	"	254	213	41	...

NAINI TAL :
The 19*th October* 1891.

W SHAKESPEAR,
Deputy Conservator of Forests.

No. 87.

FROM

J. S. GAMBLE, ESQ.,

CONSERVATOR OF FORESTS, SCHOOL CIRCLE,

N.-W. PROVINCES AND OUDH,

TO

THE CHIEF SECRETARY TO GOVERNMENT,

N.-W. PROVINCES AND OUDH,

REVENUE (FORESTS) DEPARTMENT.

Dated Dehra Dún, the 12th August 1891.

SIR,

I HAVE the honour to submit the Forest Administration Report of the School Circle for 1890-91.

I have the honour to be,

SIR,

Your most obedient servant,

J. S. GAMBLE,

Conservator of Forests, School Circle,

N.-W. Provinces and Oudh.

SCHOOL CIRCLE REPORT.

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SCHOOL CIRCLE, NORTH-WESTERN PROVINCES AND OUDH, ANNUAL PROGRESS REPORT OF FOREST ADMINISTRATION FOR THE YEAR 1890-91.

CHAPTER I.

Area and Boundaries.

1.—Area.

THE area of the forests of the circle has undergone but little change during the year. Form 49 shows an increase of 162 acres in the unclassed forests in Dehra Dún owing to revision of acreage. In Jaunsar Division, 285 acres, comprising the Amlawa Forest, are excluded, as that forest has been found to be included in the area of Kalsi; 91 acres in Lokandi Forest and 71 acres in Dharmigadh have been excluded by Notification; while, under orders of Government, 496 acres in Deogarh have been transferred to the Taroche State, though Notification has not yet issued. These changes reduce the area to—

	Acres.
Reserved forests	461,809
Leased do.	49,740
Unclassed do.	8,894
Total ...	520,443 = 813 square miles.

on March 31st 1891. The exclusion of five detached pieces, 1,754 acres, of the Pathri Forest in Saháranpur Division, has been discussed and sanctioned, but not yet finally concluded. So has the exclusion of part of the Uparla Song Forest in the Dún been discussed, but orders have not yet issued.

2.—Settlement.

2. The only forests under settlement are those of Malkot Block No. 1 in Dehra Dún, which were proposed under section 4 of the Forest Act in Notification No. $\frac{736F}{28A-3}$ of 11th December 1889. The Forest Settlement Officer, Mr. Nugent, C.S., is understood to have made his enquiries and sent his report to Government. The Superintendent of the Dún has proposed to reserve two blocks of Semla-producing forest, and a forest for lime fuel supply, in Malkot No. 2, as well as two pieces of Chír forest in the same area to be made village forests. These latter will have to be first reserved under Chapter II of the Forest Act and then transferred to "village forest" under section 27. These proposals are under consideration, as are certain proposals of the same officer relating to forest lands near Mussoorie.

3.—Boundaries.

3. In the Dehra Dún Division, Mr. Grenfell, Assistant Conservator, has been employed to prepare boundary records, and has completed the survey of the whole northern side of the Siwaliks.

The demarcation of these forests is somewhat confusing, as there are some three or four different marks at many points, and which of these is the proper one it is not always easy to say; and consequently, small boundary disputes are not uncommon and are difficult to settle. The Conservator hopes, during 1891-92, to have the Dún forests all properly and finally demarcated on a uniform plan, and surplus misleading marks can then be destroyed. The demarcation in Saharánpur Division is rather better, but still requires improvement on the same lines. In Jaunsár, the demarcation is also unsatisfactory, for there are proper cleared lines only on about 90 miles, and these do not always come actually on the boundary as they should, but the pillars are mostly in

good order. The return of demarcation is given as follows by Divisional Officers, in the same form as last year:—

Division.	Pillars.	Boundary lines.	Cost of maintenance.	Pillars requiring repairs at close of the year.
			Rs.	
Dehra Dún	1,028	221	1,379	459
Saharanpur	500	132	824	66
Jaunsar	2,115	90	1,035	285
Total ...	3,643	443	3,238	810

The Divisional Officer of Jaunsar explains that the 448 miles given last year as the length of boundary line represents the whole length, while the length for which there are cut lines is 90 miles only.

4. The unsettled boundary disputes referred to at para. 4 of last year's report were three in number. That in Saháranpur Division has been settled by the Revenue Settlement Officer, and report is being made upon it. No. i of the Jaunsar disputes has been settled by the transfer of 496 acres to Taroche; No. ii is still pending. Further disputes have occurred with the Rána of Jubal regarding a portion of Raiengarh which he claims; and with the Rána of Taroche regarding the boundary of the Kathaug Forest. These disputes are most troublesome and annoying, but in the present condition of affairs difficult to prevent, unless the Governments of the North-Western Provinces and Oudh and the Panjáb take joint action to finally settle, demarcate and survey the exact boundaries of each small State.

CHAPTER II.

1.—Surveys.

5. In Jaunsár the surveys of the Tehri-Garhwál leased forests and the Karamba and Korwa forests were completed during the year, the area surveyed in the former being 35 square miles, and that in the latter 4 square miles. The cost was Rs. 1,167 for the survey year of 1889-90 (October 1889 to September 1890) see Government of India Circular 15F, of June 6, 1891. The expenditure of the Financial year 1890-91 was Rs. 177. Maps are under preparation in the office of the Superintendent of Forest Surveys for Tehri-Garhwál and Karamba : that of Korwa has issued.

2.—Working Plans.

6. No new plans were in hand during the year. Before long a simple working plan for the forests of the Saháranpur Division should be made and the present Divisional Officer may well be entrusted with the work, owing to his knowledge of the country. The much needed supplement to the Dehra Dún working plan, to show the compartments and fix definitely the areas in which the different operations are to take place, is under preparation.

Existing Working Plans.

7. *Dehra Dún.*—The provisions of the working plan will mostly have been carried out by the end of the working season. Purchasers were not forthcoming for the fuel from the areas to be coppiced in the Ganges and Tirsal Ranges, but some fuel from the former was sold for lime-burning. The attempt to carry out the provisions of the plan as regards treatment of bamboos has not been successful, and proposals for its modification are under consideration. The Sál forests in each working circle have been divided into compartments containing approximately the area prescribed for each year's work; and these have been shown in the range maps, so that Rangers can now see at once where the operations of climber-cutting, tree-marking, tree-felling and cutting back have to be done in any particular year. Range maps are under preparation in the circle office.

8. *Jaunsar*—The provisions of the Working Plans were carried out generally, though some deviations were found necessary as follows :—

Deoban Working Plan.

(a) *Karamba Working Circle (I)*—Improvement fellings in compartment 4 of Konain Forest were postponed until demand improves

(b) *Lokanli Working Circle (II)*—Planting operations were deferred for want of plants in Bodyar Block, but 17,000 pits were got ready on an area of 30 acres, and these will be filled in 1891 or 1892 as transplants become available Instead of thinning kail in 78 acres in Marauwa Block, 100 acres were thinned in Missau Block The fencing of 10 acres in Asmari Block has not yet been carried out

(c) *Deoban Working Circle (III)*.—The closing to fire of the rest of Amlokri and Hajawa Blocks was postponed

(d) *Ban Coppice Working Circle (VI)*—Planting works were deferred in Karwa Block as there were no plants ready. The year, 1890, was an excellent year for seed, and much has been sown, but the transplants will not be ready till 1893 or 1894.

(e) *Cantonment Working Circle (X)*—Felling in Forest Garden, compartment 2, was postponed owing to absence of demand.

(f) *Kalsi Working Circle (XI)*.—No area was coppiced, there being no demand.

9 The acquisition of small patches of formerly cultivated land in the Deoban Range was completed during the year. The following having been acquired :—

	A r p.	Rs a p.	
Dhanau Khatt	6 1 27	417 0 0	
Missau "	2 1 15 7 0 5	land given in exchange. 34 12 6	
Kailo "	6 4 20	588 9 6	
Mohna "	0 0 30	11 8 0	

The arrangements were made with the help of the Cantonment Magistrate of Chakráta, Captain Hewett, to whom our acknowledgments are due.

10 *Mundali Working Plan*.—In compartments 14 and 15, 120 acres were gone over in cleaning and girdling one year in advance of the Working Plan. In compartments 9 and 10, 5 acres instead of 22½ acres of blanks were filled up, the transplants not being yet fit to go out.

11 *Tehri-Garhwál Working Plan*.—Fellings under para. 119 were still continued in Patangni Block, as the number of mature trees was found to be larger than expected We are consequently one year behind the provisions of the plan The girdling works in Temple Block, compartment 3, were postponed until the felling operations should be completed. Owing to want of kail seed, the sowings prescribed for 50 acres in Pipal Block were postponed, as was the planting of 90 acres in Lohasu and Chakora Blocks, deodár transplants not being available.

12 *Chír Forests Working Plan*—Special sanction was obtained for fellings in Utasna Block over and above the provisions of the plan.

3—Annual Programmes of work.

13. These have generally been carried out in all divisions.

CHAPTER III.

Protection and Improvement.

1.—Establishment.

14 The charge of the circle was held by Mr. C. Bagshawe up to October 13th, 1890, when he was relieved by Mr. J.S Gamble, M.A., transferred from the Northern Circle, Madras Presidency.

15. The Divisional charges were held—

Dehra Dun.

Mr. L. Mercer, Officiating Deputy Conservator... April 1st to May 19th, 1890.
" N. Hearle, Deputy Conservator ... May 19th, 1890, to end of year.

Saháranpur.

Mr. B B. Osmaston, Officiating Deputy Conservator ... April 1st to May 11th, 1890.
" L. Mercer, ditto ditto ... May 11th to end of year.

Jaunsár.

Mr. E. McA. Moir, Deputy Conservator, the whole year, except from September 24th to November 29th, 1890, when he was on privilege leave and Mr. Hearle acted for him.

Mr. M. H. Clifford, Assistant Conservator, resigned his appointment on September 30th, 1890.

Mr. A. P. Grenfell, Assistant Conservator, was employed in Jaunsár from April 24th to December 31st, 1890, and thereafter in Dehra Dún Division, till he obtained examination leave on March 20th.

16. The grants for the Executive, Protective and office establishments were distributed and utilized as follows :—

Division.	Executive and Protective Establishment.							Office establishment.						
	Permanent sanction per annum.	Temporary sanction per annum.	Total sanction as it stood on 31st March 1891.	Actual charges.				Permanent sanction per annum.	Temporary sanction per annum.	Total sanction as it stood on 31st March 1891.	Actual charges.			
				1889-90.		1890-91.					1889-90.		1890-91.	
	Rs.	Rs.	Rs.	No.	Rs.	No.	Rs.	Rs.	Rs.	Rs.	No.	Rs.	No.	Rs.
Direction ...	...	...	...	...	...	...	...	2,724	1,104	3,828	17	3,705	14	3,661
Dehra Dún ...	9,048	664	9,712	65	9,110	66	9,508	2,184	279	2,463	21	2,626	15	2,436
Saharanpur...	7,008	297	7,305	58	6,342	71	7,067	1,416	150	1,566	12	1,679	13	1,569
Jaunsár ...	8,318	1,104	9,422	50	7,764	51	8,685	2,112	516	2,628	15	2,372	15	2,355
Unallotted ...	430	...	430	...	...	...	...	120	...	120	...	...	.	...
Total ...	24,804	2,065	26,869	173	23,216	188	25,255	8,556	2,049	10,605	65	10,382	57	10,221

The increase under Executive and Protective establishments is due to the full scale of Forest Rangers having been worked up to by the promotion of Foresters. The saving under office establishment is due to the non-inclusion of elephant establishment now charged to "Conservancy and Works."

17. The circle is divided into the following executive charges :—

Division.	Area.	Number of ranges.	Average area per forest range
	Sq. m.		Sq. m.
Dehra Dún	290	6	48
Saháranpur	295	3	98
Jaunsár	220	5	46

The Jumna River Range in Jaunsár is still attached to the Deoban Range, but proposals have been made for the separation of the charge as soon as a competent Ranger can be found for the work. A Sub-Assistant Conservator is badly wanted to assist the Divisional Officer of Jaunsár in special works.

The 14 ranges were held as follows at the close of the year :—

		Rs.	No. of ranges.
Forest Ranger,	2nd grade	120	1
Ditto,	3rd "	100	2
Ditto,	5th "	60	3
Ditto,	6th "	50	4
Forester	2nd "	35	2
Ditto,	3rd "	30	1
Ditto,	4th "	20	1

The sanctioned staff of Forest Rangers is 10, as above detailed.

18 The Range Officers have nearly all been well reported on, but there is some slackness of work in Dehra Dún which requires to be remedied. In the Malhan Range in that division the markings of trees for improvement fellings and the cutting back operations have not been well done, too much being taken in places liable to frost, and the operations in Lachiwala and Pardunı were very late, the cause in the latter having been the illness of the Range Officer In Jaunsar, Forester Birkodar had to be reduced for neglect of duty.

19. The protective staff is good on the whole, best in Jaunsár, worst in the Dún, where it is difficult to get good men. Complaints have been made both from the Dún and Saharanpur of the unwillingness of forest guards properly to visit their forests In Saharanpur one forest guard, a Gurkha, of long and good service, was accidentally shot in the forest by a native shikári, and in Dehra Dún one guard was convicted of extorting some *ghi* from a hill man in collusion with a police constable and sentenced to six months' imprisonment.

20. The Office staff is well reported on as regards energy and work, but it is weak in quality and requires improvement Proposals on the subject are before Government, and the Conservator hopes they will be accepted

2 —General Protection and Breaches of Forest Law.

21 Form No 50 gives the prosecutions for forest offences during 1890-91. The number of cases taken into Court was 18 as against 10 last year. In 15 cases out of the 18, *i e.*, 83 per cent, convictions were obtained, involving 26 persons. The most important cases were those in Saháranpur, where 3 cases of incendiarism were brought home to the offenders by the exertions of Prabhu Lal, the Ranger of the Central Range, and in Jaunsár, where two men were convicted of destroying one of the boundary pillars on the Jaunsár-Tehri boundary and sentenced to five months' imprisonment. No others call for remark except the wholesale theft of sleepers which took place at Gunthala village in the Umballa district after the floods on the Jumna in February 1891. The case had not yet gone into court at the end of the year.

22. The number of cases disposed of under section 67 of the Forest Act was 84 out of 89 sent up for orders They were all trivial ones

3 —Fire Conservancy.

23 The subject will be treated in a separate report The fire season is not yet over (July 18) Up to date the fires have been very few and the damage done small Several cases of fire caused by lightning have occured and in all Divisions.

4.—Grazing .

24 The following statement shows the areas open and closed during the year —

Division		Total area.	Area closed to grazing	Percentage of total area closed	Remarks
		Acres	Acres		
Dehra Dún		185,432	43 363	23 38	Of this area 21,541 acres are closed from February to July
Saharanpur		188,564	63,504	33 67	
Jaunsár		146,518	44,757	30 54	
Total for the Circle	1890 91	520,514	151,624	29 13	
	1889 90 ...	521,224	151,479	29 06	

The increase in the area closed is in the Saháranpur Division, where certain areas worked as coppice have been closed, and portions of Hajawa, Deoban Range, and Banarpani in Kotigadh Range of the Jaunsár Division, were opened departmentally for a month to sheep grazing in places where there were no seedlings to be damaged

25. The actual head of cattle grazing in the open forests of the Dehra Dún, Saháranpur and Jaunsár Divisions is as follows :—

	Acres per head.		Head of cattle.	
	1889-90.	1890-91.	1889-90.	1890-91.
Dehra Dún	4 8	4 1	20,608	34,699
Saháranpur	1·56	1·88	73,305	66,455
Jaunsár	2 39	2 45	42,873	41,531

It is clear from this that the grazing in Saháranpur Division is excessive. The Conservator sees, however, no reason to make similar complaint as regards the greater part of Dehra Dún and Jaunsár, though in them also some localities bear the unmistakeable signs of too many cattle for the area.

26. *Grazing dues.*—The past and present receipts on this account compare as follows :—

	Receipts.	Per acre.	Outstanding on 31st March.
	Rs.		Rs. a. p.
1888 89	28,664	1·24 annas.	81 7 0
1889-90	27,782	1·2 „	29 0 0
1890-91	18,679	·80 „	8,315 0 0

Of these large outstandings Rs. 1,546 are in the Dún, Rs. 6,769 in Saháranpur and none in Jaunsár. The large amount still due to Government in Saháranpur is explained by the Divisional Officer as follows :—" The Collector of Saháranpur, however, was of opinion that the assessment of the previous three years with the corrections " and revision that had been effected in it during those three years should be extended to " another period of three years, no new assessment being necessary. This was done in " 1889-90, the first year of the second period of three years, and the dues collected; but it " was found that there were so many objections from cattle owners to this assessment that " to carry it into force any longer would be a grave injustice, if not an impossibility. " Therefore in April last the Collector ordered a new assessment. The lists of cattle " for this new assessment were received from the Tahsildárs between the 21st May and " 18th August and had to be checked by the Range Officers, and they were received " back from them in October and November, so that the corrected lists were not sent to " the Collector until the 13th December. All the dues therefore had to be collected " between the 13th December and the 31st March 1891, which it was found impossible " to do." The Divisional Officer also reports that the recent refund of money to Mr. Powell, who had complained of wrongful levy of dues from him, has led to some similar complaints and applications which it will not be easy to decide on. The outstandings in Dehra Dún are due to recent introduction of the rules, which are reported " not to work justly and to urgently require revision." The Conservator strongly endorses this latter remark and is awaiting orders of Government on the subject which have been promised, and hopes that some more workable rules can be framed. Rules framed apparently under no definite law, and which cannot be always legally enforced when the occasion arises, can scarcely be said to work well.

27. *Cutting of grass.*—The demand for fodder grass from forests near Dehra is gradually and largely increasing.

5.—Natural Reproduction.

28. The sál seeded well in 1890 in the plains forests, and the year was a good one for deodár in the hills of Jaunsár. There, too, the Kharshu oak seeded well, but the other oaks as well as the pines and firs failed almost completely. The frosts during the winter of 1890-91 were very severe, and much damage was done to sál and other trees, especially in the Dún. The thermometer at Dehra twice registered nine degrees of frost, and the effects were noticeable not only on young plants, but even on the topmost boughs of tall trees. Mr. Hearle very rightly remarks that the lesson which this teaches is that in frosty localities the

greatest caution must be taken in removing the overhead cover. The natural reproduction of deodár in Jaunsár Division, especially in Tehrí-Garhwál, is extremely good, and that of other important trees is very good also. The chír, however, is only good where protected carefully; but it is shown that limited grazing, such as exists in most of Jaunsár, is rather beneficial than otherwise, as it assists to remove the thick covering of grass and pine needles in places and so allows the seed to reach the soil. On those reserves which are allowed to be burnt over, of course, chír reproduction is only conspicuous by its absence.

6.—Artificial Reproduction.

29. The work and expenditure under this head compare as follows with that of last year:—

	Expenditure.		Added area.	
	1889-90.	1890-91.	1889-90.	1890-91.
	Rs.	Rs.	Acres.	Acres.
Dehra Dún	177	74	...	...
Saháranpur	97	118	½	...
Jaunsár	1,418	1,111	151	36

30. The only works done in the Dehra Dún Division were clearing grass around young bamboos in the Johra plantation and repairing the Parduni nursery. The bamboo plantation had been given up as a failure, but the Conservator on inspection was by no means inclined to judge it so harshly, for there are many plants coming on excellently and in some places in spite of fire.

31. In Saháranpur, Rs. 99 were spent in clearing the Pathri sissu plantation and Rs. 19 on other areas.

32. In Jaunsár the cost of planting work has been Rs. 1,111 during the year, which included the preparation and sowing or planting when plants were available, clearing and resowing line sowings, transplanting plants in nurseries, draining of existing plantations and digging pits for next year's work in nearly all the ranges of the division. Mr. Moir remarks that the planting of deodár is much more successful than sowings, and in order to ensure success the plants should not be planted out till they are three years old. The Conservator, who has recently inspected all planting works most carefully, is of opinion that deodár sowings should be discontinued; that better and more permanent nurseries, properly irrigated where possible, should be made, and that definite systematic work with large plants should replace the somewhat desultory sowing and planting of recent years. At the same time, he is bound to acknowledge the excellent work done on the whole in the restocking of blanks in Jaunsár and the great success obtained in all favourable localities. Owing to the good supply of seed available, nursery beds were sown with deodár in all ranges.

33. The Chakráta Forest Garden was kept up, vegetables being no longer grown.

7.—Works of Improvement.

34. *Climber cutting.*—

	Area.		Cost.	
	1889-90.	1890-91.	1889-90.	1890-91.
	Acres.	Acres.	Rs.	Rs.
Dehra Dún	9,738	4,595	861	646
Saháranpur	798	155	59	24
Jaunsár	...	...	...	...
	Sq. m.	Sq. m.	Cost per square mile.	
			Rs.	Rs.
Whole circle	16½	7½	56	89

In addition to the areas prescribed by the working plan, creepers were cut over 200 acres in the Kukat forests of Lachiwála block of the Dehra Dún Division, which it is proposed to work as a new coppice working circle. Compartment 3 of Kanarau Forest is a mass of creepers, which has necessarily increased the cost of the operations. Climbers were very numerous in the area cleaned in the Saháranpur Division.

35. *Cutting back badly grown and damaged trees.*

	Area.		Cost.	
	1889-90.	1890-91.	1889-90.	1890-91.
	Acres.	Acres.	Rs.	Rs.
Dehra Dún	1,200	3,642	798	1,748

The work was still going on at the close of the year, and the areas prescribed by the plan will all have been gone over by the end of May 1891. As an experiment, 50 bamboo clumps were thinned by the axe at Ránipur, all badly grown shoots being cut out at a cost of Rs. 9. A similar operation is being taken on hand with the saw. Similar work is also being done in the Johra block in Dehra Dún Division. The Conservator hopes that it can be proved that by the artificial cleaning out of old dry and badly shaped halms, the congested state of the bamboo clumps will be relieved and both the quality and quantity of the outturn and the facilities for making it available be increased.

36. *Girdling and thinning.*—The following was the work done :—

	Area		Cost.	
	1889-90.	1890-91.	1889-90.	1890-91.
	Acres.	Acres.	Rs.	Rs.
Dehra Dún	6,550	3,200	1,132	264
Jaunsár	2,020	1,490	1,149	598

Work was still in progress in the Dún forests at the close of the year.

37. In Jaunsár the following work was done :—

		Acres			Acres.
Deoban Range—	Missau Block ...	100	Deota Range—	Saras Forest ...	1,014
	Konain „ ...	50	Kotigadh do.	Lohasu Block ...	80
	Bodyar „ ...	4		Kanda „ ...	42
Bawar ditto—	Karamba „ ...	50	Deogarh do.	Murach Forest ...	83
	Mundali „ ...	185			
	Kathyan „ ...	130		Total ...	1,738

The work was all well done except that in Deogarh Range, where there was an incompetent Forester. The Conservator has been glad to notice the generally judicious manner in which these difficult works have been carried out.

38. The growth of coppice in the Nichla Suswa Block in Dehra Dún and the Tara and Mohand blocks in Saháranpur is good; as is that at Kalsi and Korwá in Jaunsár. The Karshu coppice at Gidhi-khad is reported slow, but the Conservator thinks that better could scarcely be expected at such an elevation (nearly 9,000 feet) and the work has been carefully carried out, very few stools failing to shoot well.

8.—Roads and Communications.

39. In Dehra Dún Division, Rs. 2,224 were spent, of which Rs. 442 on capital and Rs. 1,782 on maintenance charges. The Rs. 442 were on the Tirsal Range cart-road, 16 feet wide and 3 miles, 64 chains long, and on the Nichla-Suswa road, 12 feet wide and 2 miles long. We have now in the Dún 253 miles of tracks mostly suitable for carts, and 41 miles of smaller paths, but they are still insufficient.

40. In Saháranpur Division Rs. 587 were spent, all on maintenance. The usual contribution of the Saháranpur District Board towards the up-keep of the Khara-Hardwár road was reduced this year from Rs 430 to Rs. 205: the full amount, however, is to be given in future. This division badly requires transverse roads to open up the forests.

41. In Jaunsár Division Rs. 3,840 were spent, of which Rs. 835 on capital, chiefly on sleeper carrying paths, the completion of the Dakhpathar cart-road (Rs. 93) and the Thadiar-Bamsu path, of which the first 2 miles were done for Rs. 64. There are now in the division 128 miles of bridle paths, 1½ mile cart-road and 354 miles foot paths maintained by the department. Rupees 300 contributed as usual by the Dehra Dún District Board, added to by the department, was spent on improving the main thoroughfare of Upper Jaunsár, the road from Chakráta over Deoban, Mundali and

Kathian to the Tons, which badly requires still further expenditure on railings, retaining walls and the cutting off of jutting corners.

42. *Bridges.*—The chief works were (1) the reconstruction of the Maindrot foot passenger suspension bridge, well carried out by Ranger Rama Dutt, under the Divisional Officer, for Rs. 226; (2) the reconstruction of bridge No. 2 on the Thadiar sledge road, which had been destroyed by a boulder falling from above. There are 71 bridges in all maintained in the Division, chief of which are the suspension bridges of Thadiar and Tiuni.

The total expenditure on roads, bridges, sledge roads, &c., was Rs. 6,651 as against Rs. 10,170 in the previous year, when the Thadiar sledge road was made.

9.—Buildings.

43. In Dehra Dún Division, a small one room inspection house was nearly completed at Kansrau at a cost of Rs. 929. An elephant shed at Dhaulani and mahout's hut at Karwapani were built for Rs. 219, and Rs. 151 were spent in improvements to range and beat headquarters, making a total of Rs. 1,299 spent on construction. Rupees 1,333 were spent on maintenance of existing houses of all kinds. In January 1891, in a thunderstorm, the rest-house on the Maidan Hill was struck by lightning and burnt down. It was very rarely used and need not be rebuilt.

44. In Saháranpur Division a small inspection house was nearly completed at Kasumri for Rs. 964; an elephant shed at Dholkhand commenced and Rs. 47 spent on it, and Rs. 61 were spent on the commencement of a range headquarters house at Ránipur, making, with a few smaller items, a total of Rs. 1,098 spent on construction. Rupees 951 were spent on maintenance, the chief item of which was the repairs to the Beribara house, which were badly wanted.

45. In Jaunsár Division a fuel storing shed was built at the Rifle Range, Chakrita, for Rs. 604; a Forest Ranger's inspection hut at Bhujkoti for Rs. 64; four good forest guards' chaukis at Baniana, Riknargadh, Sansog and Naintwar for Rs. 751, and a shop and stable at Tiuni Bridge for Rs. 93. So that, in all, Rs. 1,512 were spent on construction and Rs. 2,624 on maintenance. All buildings are now reported in good order.

46. The following is the return of buildings at the close of the year :—

Division.	Rest-houses for controlling staff.		Quarters for subordinates (excluding revenue depôts).		Offices, stores, revenue depôts, &c.		Wells.		Total.	
	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.
Direction	...	...	1	12	3	5	...	...	4	17
Dehra Dún	30	31	69	73	2	3	2	2	103	109
Saháranpur	4	4	41	29	1	1	6	6	52	40
Jaunsár...	17	17	70	65	21	18	...	...	108	100
Total for Circle ...	51	52	181	179	27	27	8	8	267	266

47. It may be well to put on record the list of permanent forest inspection houses in the circle. These are—

			Rs.
Dehra Dún Division ...	1. Rámpur Mandi,	value about	1,000
	2. Karwapani	ditto	1,500
	3. Phandowála	ditto	3,000
	4. Lachiwála	ditto	2,000
	5. Kansrau	ditto	1,000
	6. Parduni	ditto	800
Saháranpur Division ...	1. Pathri	ditto	300
	2. Dholkhand	ditto	4,000
	3. Beribara	ditto	600
	4. Kasumri	ditto	1,200

					Rs.
Jaunsár Division ...	1	Chakráta (headquarters), value about		...	8,700
	2.	Deoban	ditto	...	3,500
	3	Bodyar	ditto	..	.. 1,000
	4	Konain	ditto	...	... 300
	5	Koti Kanásar	ditto	...	... 200
	6	Mundali	ditto	...	... 1,500
	7	Lokar	ditto	...	. 300
	8	Kathian	ditto	...	... 1,000
	9	Deota	ditto	..	... 3,000
	10	Bamsu	ditto	...	... 400
	11	Thadiar	ditto	...	.. 300
	12	Chachpur	ditto	...	. 1,000
	13	Murach	ditto	.	... 500
	14	Lambatách	ditto	...	.. 400

48. The Conservator has inspected, since he arrived in the circle, all these, except Bamsu, Chachpur and Murach, and the figures of value given are his estimate of the present value of the houses and not the values of the stock lists. He is glad to say that he sees no reason for the construction of any more inspection houses, the 24 above mentioned being ample for all present requirements and most useful for facilitating inspection. It will now be necessary to put the range headquarters houses in good order and complete them for some ranges of the Dún and Sahéranpur, which so far are not properly supplied.

49. The total amount spent on buildings during the year was Rs. 8,818, of which Rs 3,908 on capital expenditure and Rs. 4,910 on maintenance.

CHAPTER IV.

Yield and Working.

50 The yield and the results of the work of the year as compared with those of the previous year, 1889-90, may be summarized as follows —

		1889 90.	1890 91	Increase	Decrease
1	Yield of timber and fuel .. .. c ft	3,646,978	3,218,390	...	428,588
2	Value of above ... . Rs	4,54,060	4,83,929	29 869	
3	Yield of timber . ... c ft	849,472	904,288	54,816	...
4	Value of above ... ... Rs	3,45,572	3,85,400	39,828	...
5	Yield of timber removed by departmental agency and purchasers ... . . c ft	735,741	849,146	113,405	..
6	Value of above .. .. Rs	3,35,606	3,70,762	35,156	...
7	Yield of timber removed by grantees and right holders .. .. c ft	113,731	55,142	..	58,589
8	Value of above .. .. Rs	9,966	14,638	4,672	...
9	Yield of firewood and charcoal .. ... c ft	2,797,506	2,314,102		483,404
10	Value of above ... Rs	1,08,488	98,529	...	9,959
11	Yield of fuel removed by departmental agency ... c ft	561,007	252,995	...	308,012
12	Value of above . .. ... Rs	45,947	17,748		28,199
13	Yield of fuel removed by purchasers ... c ft	534,375	646,613	112,238	.
14	Value of above ... . Rs	11,917	9,289	...	2,628
15	Yield of fuel removed by grantees and right holders . ... c ft	1,702,124	1,414,494	..	28,763
16	Value of above . . Rs	50,624	71,492	20,868	
17	Timber sold by departmental agency .. ... c ft	254,735	182,196		72,539
18	Receipts on above ... .. Rs	2,10,997	1,45,271	...	65,726
19	Timber sold direct to purchasers ... ... c ft	445,009	574,363	129,354	...
20	Receipts on above .. .. Rs	80,485	96,638	16,153	..
21	Fuel sold by departmental agency ... .. c ft	508,181	413,366		94,815
22	Receipts on above ... . Rs	37,379	32,034	..	5,345
23	Fuel sold direct to purchasers . . c ft	534,375	646,613	112,238	
24	Receipts on above . ... Rs	11,917	9,289		2,628
25	Bamboos sold ... . Scores	130,885	86,297	...	44,588
26	Value of above . ... Rs.	16,708	10,551	.	6,157
27	Minor produce and grazing ... ... ,,	52,518	57,439	4,921	...
28	Value of other receipts ... ... ,,	26,800	16,090	...	10,710
29	Yield of timber and fuel per square mile . c ft	4,475	3,958	..	517
30	Value of above per square mile ... ... Rs.	557	595	38	..
31	Gross cash receipts per square mile ... .. ,,	531	428	...	103
32	Net ditto ditto ... .. ,,	198	101	...	97

51. Code Forms Nos. 54 to 57 supply detailed information regarding the yield, and comparative abstracts have been attached to Forms Nos. 54, 55 and 56.

52. Forms Nos. 54 and 55 show the results of the year as regards outturn, classified (in the former) under (*a*) Regeneration, (*b*) Amelioration and (*c*) Miscellaneous, on the one hand, and on the other, under the heads of Government, purchasers and free grantees. The Conservator has transferred to the latter head the amounts given by Divisional Officers under "Right-holders," as he cannot discover that there are any persons enjoying rights admitted and recorded at settlement. The produce given under Government concession is distinctly of the nature of a free grant.

53. *In Dehra Dún*, the forests are worked under a Working Plan which provides for "Improvement Fellings," and the coupes of the year are marked and sold by auction standing. These coupes gave altogether 309,919 cubic feet. Under the system in force, the exploitation of the forest is carried on thus:—

Creeper cutting, 1st year,
Tree marking, 2nd year,
Tree felling and removal, 3rd and 4th years,
Cutting back, 5th year,

so that no single year's returns give the exact results of cuttings. But the Divisional Officer has supplied an abstract showing the areas gone over and the number of trees marked for cutting in the different Working Circles since the Working Plan came into force:—

Working circles.	Sál and sain marked per acre.												Total number of trees, including fuel trees marked per acre.					
	1887-88.				1888-89.				1889-90.				1887-88		1888-89.		1889-90.	
	Acres.	1½—4½'.	Over 4½'.	Total.	Acres.	1½—4½'.	Over 4½'.	Total.	Acres.	1½—4½'.	Over 4½'.	Total.	Acres.	Trees per acre.	Acres.	Trees per acre.	Acres.	Trees per acre.
Jumna	1,200	18·4	1	19·4	1,200	6 8	·4	7 2	1,150	12	1	13	1,200	28 1	1,200	31·6	1,150	21·1
Malhan	730	7 2	1·7	8 9	800	5 4	·5	5 9	800	8 9	·7	9 6	730	19 2	800	22·3	800	22 9
Rámgarh... ...	530	5·7	·4	6 1	500	3 5	·2	3·7	500	6·7	·5	7·2	530	38·8	500	36·0	500	21 4
Nagsidh	500	4 7	·4	5 1	500	4 8	·5	5·3	500	5 9	·6	6·5	500	9 5	500	22 0	500	20·3
Thano	...	...	...	...	200	11	1·	12 5	200	13·3	1·8	15 1	...	...	200	36·3	200	34·6
Tiral	...	...	...	...	..	...	.. 1	...	480	·1	·1	·2	...	...	...	...	480	8·4
Parduni	1,000	1·1	·3	1·4	1,000	·9	·	1·0	1,000	1 7	·6	2 3	1,000	24·3	1,000	10·5	1,000	8 9
Average ...	3,960	10·3	·5	10 8	4,200	4 5	·4	4 9	4,630	7·3	·7	8	3,960	24·3	4,200	24·4	4,630	18

In the Jumna Working Circle the trees are very inferior, sound ones being rare; hence the higher number of trees marked. In Thano, the forest is extremely well stocked without blanks.

54. The following were the results of the auction sales of the coupes prescribed for the year in Dehra Dún Division:—

	Rs.
Coupe No. 3, Shahpur block, Jumna Working Circle	12,100
Do. „ 6, Maniksidh block, Malhan Working Circle	13,075
Do „ 8, Balindawala block, Rámgarh Working Circle	6,825
Do. „ 3, Lachiwála block, Nagsidh Working Circle	8,000
Do. „ 3, Bahera block, Parduni Working Circle	7,150
Do. „ 3, Barkot block, Tiral Working Circle	425

Coupe No. 3, Lambirao block, Thano Working Circle, was not sold by auction, but the produce was given out to tender at a fixed rate per cubic foot of outturn. Coupe No. 2 of this block realized in this way Rs. 7,150.

55. The coppice fellings were in the Khairi and Nichla Suswa Circles; and the clearances consisted in the clean felling of a long and broad fire protection belt parallel to the Siwalik Range and called the Hatiwála line.

56 *In Sahâranpur* there is as yet no Working Plan and the work consists of selection sales to purchasers in the Central and Western Ranges, in coppice cuttings at Ranipur, Beribara and Mohand and in "clearances" similar to those of the Dún along the Khara-Hardwár road The bamboo sales have much fallen off because the stock has so much deteriorated Only 854,620 were cut instead of 1,598,900 last year, and the revenue was only Rs 5,363 instead of Rs. 10,004. The demand continues good, but the clumps are badly congested and nothing but very strong and expensive measures will relieve them

57 *In Jaunsar* the forests are worked under the Deoban, Chír forests, Mundah and Tehri-Garhwál Working Plans, and most of the work done is by departmental agency, the chief works being—

Deoban Working Circle	(1) Supply of firewood to Chakráta (2) Ditto sawn timber to Public Works Department.
Chír forests Working Circle	(3) Cutting and sale of chír karris on the river banks. (4) Sale of standing chír to purchasers.
Mundah Working Plan	(5) Cutting and sale of sleepers from dry trees.
Tehri Garhwal Working Plan	(6) Supply of sleepers to Rájputána Railway (7) Sale of 800 green deodár to purchasers.
Other localities .	(8) Cutting and sale of sleepers from dry trees in Deogarh Range. (9) Extraction and conversion of resin and tar

58 The results of the year's working as above were—

(1) 83,865 cubic feet of firewood was cut and 78,595 cubic feet carried to Chakrata and sold It is satisfactory here to note the final settlement of the long outstanding accounts of previous years The proposed Deoban Chakrata sledge road has not yet been constructed, or even definitely and finally proposed, partly on account of the opposition of the cantonment authorities, partly on account of the decrease in demand which makes it doubtful if it would be a financial improvement

(2) 141 green and 14 dry deodar and 282 rai trees were felled and converted into 12,290 scantlings, of which 11,792, aggregating 11,739 cubic feet, were taken to depôt and sold The Conservator is glad to express his satisfaction with the excellent depôt arrangements in force

(3) 224 chír trees were cut into 11,207 karris in Ninus Block and 413 trees into 7,126 karris in Chatra Block These chír karris were carried to the banks of the Tons The 15,820 previously on hand were sold, fetching Rs 9-12-0 per score

(4) 2,811 chír trees were sold from Khunigádh and other blocks for an average rate of Rs 6 each

(5) 32,853 metre gauge sleepers were sawn out of dry trees in the Mundah forests, and 25,174 carried to Deikhera depôt; 34,208 were then floated down the Dharngádh and Tons.

(6) 1,862 green and 201 dry deodár trees were felled and cut up in the Deota forests and 85 136 sleepers sawn 94,164 sleepers were carried to Chabbai depôt at the head of the sledge road, and 81,721 sledged to Thadiar for launching in the Tons and eventual transport to Delhi

(7) The trees were sold at the average rate of Rs 16-10-0 each

(8) 11,842 sleepers were sawn from dry trees in Sansog forest, transported to the Tons and floated to the plains.

(9) 327½ maunds of crude resin were extracted of which 219 maunds sent to Dehra were converted into 170 maunds rosin and 390 gallons of turpentine. 33 maunds of pine tar were also manufactured in Chatra forest

59. There were also a few minor works, like the cutting of firewood in Korwa forest, compartments 14 and 1, for the Chakrata Brewery, to which 5,870 cubic feet were supplied, and the sale of dry deodár from Buktaragadh in Kotigádh Range at the rates of three annas nine pie and seven annas per broad and metre gauge sleepers respectively.

60 In February 1891 a flood in the Jumna river carried away a large amount of timber and necessitated the removal of the boom at Dakhpathar It was at first supposed that there would be considerable loss, but although final results are not yet known, it is hoped that not more than 1,500 sleepers will be finally missing, mostly stolen by villagers of the Umballa district.

61. The new River Rules came into force on January 1st, 1891, and are expected to greatly improve the arrangements for the catching of Government and merchants' timber. The reduced rates are much appreciated. The following statement shows the timber trade of the Junna in 1890-91 :—

Description.	Government departmental timber.	Government timber removed by purchasers.	Timber from private forest.	Total.
	Number of pieces.	Number of pieces.	Number of pieces	Number of pieces.
Deodár sleepers	105,386	20,187	162,048	287,621
Chír scantlings	37	78,368	143,805	222,210
Sál, &c., do.	71	917	101,688	102,676
Total ... 1890-91 ..	105,494	99,472	407,541	612,507
Total ... 1889-90 ...	118,610	168,750	526,126	813,486

62. The above shows a decrease in the quantity of timber exported, which is not actually the case; a large quantity of timber went adrift in the floods of February, and much of the timber caught could not be rafted till after the close of the year. The Jumna river dues amounted to Rs. 12,240 against Rs. 18,747 in 1889-90, which is partly due to the floods of February last and partly to a reduction of the rafting and boom dues.

63. *Produce removed by free grantees and privilege holders.*—The estimated and actual issues under all heads compare as follows:—

	1889-90.		1890-91.	
	Quantity.	Value.	Quantity.	Value.
	C. ft.	Rs.	C. ft.	Rs.
Timber	113,781	9,966	55,142	14,038
Fuel	1,702,124	50,024	1,414,494	71,492
Grass and grazing	...	7,836	...	7,065
Minor produce	...	662	...	511
Total ...	..	69,088	...	94,306

The entries for the Dún and Saháranpur Divisions consisted of grazing dues at reduced rates by the privileged villagers and the removal of head loads of fuel, as also of some poles, &c., in the Saháranpur Division granted to the lessees of the different forest blocks to build grass huts with. Several of the Jaunsar khatts did not apply at all for their trees, and others did not actually remove all the trees and other produce they were entitled to. This accounts for the decrease shown in the return.

64. *Resin Tapping.*—This industry promises to become one of great importance in the hills, as numerous enquiries both for crude resin and for the manufactured colophony or rosin are being sent. We are offered as much as Rs. 4 to Rs. 4-4-0 per maund of crude stuff in Chakráta, and steps have consequently been taken to tap a much greater number of trees in 1891 and improve the style of cut so as to ensure a better flow and less waste. It has already been recorded that 219 maunds of crude resin were worked up at the Forest School in Dehra and converted into 170 maunds of rosin and 390 gallons of oil of turpentine. The rosin was all sold to the North-West Soap Company at Meerut at Rs. 5-8-0 per maund; but so far the turpentine has not sold well, although those who have tried it, and among them the Deputy Superintendent of the Great Trigonometrical Survey at Dehra, have pronounced favourably on its quality. The Conservator has not the slightest doubt of its eventually finding a very good market. All it want

is to be known, and he will be glad of any assistance the Government can give, in bringing it to the notice of Railway and Public Works Department Engineers and other likely customers. What has been sold has been sold at a nominal rate of Rs. 2-8-0 per gallon. The value of the rosin and turpentine produced amounted to Rs. 1,740, and against this must be set the cost of carriage from Chakráta to Dehra and other expenses, so that the following may be said to be the net revenue under departmental working. :—

Departmental working.

	Rs.	Rs.
Value of rosin and turpentine turned out		1,740
Carriage from Chakráta	114	
Charges in Dehra for distilling, tins, jars, &c...	438	
10 per cent. of cost of still and other plant, Rs. 350	35	
¼ of pay of Forest Ranger in charge for five months	50	
		637
Net revenue		1,103

or, per maund of crude resin worked up, say, Rs. 5, which is Re. 0-12-0 to Re. 1 more than we were offered in Chakráta.

The cost of collection in the forest of the crude resin and its delivery in Chakráta is Rs. 3-2-0 per maund, so that the profit from the work is on an average Re. 1 per maund under local sales and Re. 1-14-0 per maund under departmental distillation. Another industry which is just starting, and has, the Conservator thinks, a good future is that of the extraction of tar from roots and refuse of the chír pine and its boiling down into pitch. Last year 90 maunds of this tar, which resembles what is known as "Burgundy pitch," were produced and chiefly used locally for tarring the roofs of houses and the timbers of bridges and fences.

Forest Ranger Birbal, of the Forest School, has rendered good service in supervising the resin distilling works, which require great care, as the temperature must never be allowed to get too high in the boiler.

CHAPTER V.

Financial Results.

65. The following table shows the results (1) average of 13 years; (2) of the four previous years; (3) of the year under review :—

	Average of 13 years.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Receipts	3,12,061	3,36,859	3,57,134	3,90,315	4,32,660	3,48,528
Expenditure	2,62,636	2,67,343	2,77,592	2,67,470	2,71,104	2,66,613
Surplus ...	49,445	69,516	79,542	1,22,845	1,61,556	81,915
Percentage of expenditure on receipts,	84·15	79·36	77 72	68 52	62 66	76 52

The receipts show a considerable falling-off from those of the previous year—the highest on record—but an increase on the general average. The expenditure calls for but little general remark. The cause of the decrease in revenue was chiefly the inability of the Rájputána Railway to take over 30,000 sleepers, the value of which would have raised the total amount to nearly four lakhs.

66 The receipts and expenditure of the Divisions compare as follows with the results of the previous year —

Division	Receipts.			Expenditure			Surplus or deficit.		
	Average of eight previous years 1881 82 to 1888 89	1889 90	1890-91	Average of eight previous years, 1881 82 to 1888 89	1889-90	1890 91	Average of eight previous years, 1881 82 to 1888 89	1889 90	1890 91
	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs
Dehra Dún	70 330	1 05,239	93,558	50 520	45 806	45,858	+ 25 813	+ 59 433	+ 47,700
Saháranpur .	37 718	45,376	32,615	22,562	20 653	28 873	+ 15 156	+ 24 722	+ 3,742
Jaunsár	1,92,161	2,81,413	2,22 115	1,61,537	1,70 658	1,63 684	+ 30,624	+ 110,755	+ 58,431
Direction ..	1,431	633	240	35,867	34,987	28,198	−34,436	−33,354	−27,958
Total	3,07,649	4,32 660	3,48,528	2,70,492	2,71 104	2,66,613	+ 37,157	+ 1,61,556	+ 81,915

67 *In Dehra Dún Division* the receipts, though less than those of last year, are still over the budget estimate the expenditure is nearly the same

68 *In Saharanpur Division* the falling-off in receipts is due chiefly to the deterioration of bamboo stock leading to a reduction in sales and to the non-collection of grazing dues The increase of expenditure is due to the higher pay of the Divisional and Range Officers, the purchase of an elephant, &c

69 *In Jaunsár Division* the decrease of receipts is due, as before stated, to the Railway Company having asked to be allowed to take over 30,000 sleepers less than usual, while there was an unexpected increase of Rs 5,649 on account of the realizations from the Commissariat Department for surplus fuel of previous years

The expenditure is normal, the high rate of last year having been caused by the special work on the Thadiar sledge road, but there was some increase due to the payment of a sum of Rs 2,731 to the Mahárája of Sirmur as refund of excess deductions made in a previous year in calculating his share of the Dakhpathai dues

70 Form No. 62 shows the financial results of the year divided among the main heads of "Departmental works," "Other revenue" and "Formation, improvement and protection of forests," It is difficult to compare it with the results of last year as the returns of 1889-90 were not made out in the manner prescribed by the Code, which requires the distribution of direction charges The Conservator has bestowed some care in the proper apportionment of the expenditure under the different heads and sub-heads, and believes that the return as now made out is a fair distribution It will be seen that departmental timber works give a surplus, all told, of Rs 28,387, which would have been much greater if all the Jaunsar sleepers had been sold, though not quite so great as last year's returns show In the other divisions, departmental works are small and unimportant The surplus under "Other revenue," under which head come the greater part of the sales of coupes in Dehra Dun, the whole of the Saháranpur miscellaneous sales and the sales of standing trees in Jaunsár, amounts to Rs 1,24,937 as against Rs 1,46,362 in 1889-90, the reduction being chiefly in Saháranpur The charges on formation, protection and improvement of forests came, with the necessary distribution of general expenditure, to Rs 71,409 as against Rs 88,809, so that it is to be feared that the remarks of the Government of India in Revenue and Agricultural Department No 966F. of 24th November 1890, as to the importance of works for the improvement of the condition of the forests are again applicable In Jaunsár much has been done in this direction for several years past, in the way of thinnings, cleanings and the restocking of blanks in first class forest reserves, but real progress in the improvement of the great bulk of the reserved forests can not take

place until the present wasteful system of allowing the grass to be yearly burnt over large areas is put a stop to. It is not really necessary, the Conservator believes, because its effect is to encourage coarse grasses at the expense of the finer and more nourishing kinds, and though possibly it would cause some outcry if it were suddenly and sweepingly stopped, yet if the Government permitted and the revenue authorities could be induced to assist, the Conservator thinks that there would be no more difficulty in gradually, but firmly, extending protection from fire to all the reserved forests of Jaunsár than has been found elsewhere. The Jaunsár reserved forests are the first which, with considerable experience in different provinces, the Conservator has met with, in portions of which deliberate firing is permitted. In the Dehra Dún Division, the working plan prescriptions are generally carried out as regards creeper cutting, improvement thinnings and cutting back works, and these are bearing good fruit in the improvement of the growth; but nothing has been done in the way of restocking blanks, and there is not even a nursery or plantation in which the Forest School students may study the important subject of artificial reproduction in the Indian plains. The roads, too, in Dehra Dún, are insufficient: and export works have to be usually carried on by many temporary cart tracks, resulting in damage to the growth along them. In Saháranpur there is practically only one road, the "raus" or mountain torrent beds still affording the chief communication with the interior of the forests.

71. In Form No. 60 are shown the revenue received and outstandings on account of revenue for the year. It will be seen that the outstandings due to the department have increased from Rs. 32,022 at the end of 1889-90 to Rs. 57,261 at the end of 1890-91. The increase is in all Divisions and is chiefly due to: (1) *Dehra Dún*, Rs. 6,233 being due from lessees of coupes and Rs. 1,546 being due for arrears of grazing dues; (2) *Saháranpur*, Rs. 6,769 being due for arrears of grazing dues; and (3) *Jaunsár*, outstandings on account of purchase of trees sold standing, which, however, are not due till the current year.

72. In Form No. 61 are shown the outstandings and liabilities on account of contractors and disbursers, the amount outstanding at the end of the year being less than it was at the beginning and calling for no special remark.

73. The value of the year's transactions stands as follows:—

	Rs.		Rs.
Cash surplus			81,915
Add—Increase in value of timber and stock, Form 57A			44,335
			1,26,240
Deduct—Increase in value of live and dead stock, Form 57B ...			34,516
			91,724
Add—Increase of revenue outstandings, Form 60			25,239
			1,16,06
Deduct—Departmental liabilities	6	Form No. 61	713
Decrease in outstandings due to department ...	707		
Total net profits of the year ...			1,16,250

which is a falling-off of Rs. 28,993 from the results of 1889-90.

CHAPTER VI.

General.

74. *Services of the staff.*—The Conservator is glad to acknowledge the aid and assistance given him since he assumed charge by all three Divisional Officers. He has

been partly during the year under review (Dehra Dun and Sahâranpur), partly since its close (Jaunsar), through all the divisions and made himself acquainted with all works in progress

75 The Divisional Officers have not specially reported on the individuals of their Range staff, but the Conservator has had his attention drawn on tour to the good work done by Forest Rangers Keshavanand, Sadanand and Rama Dutt in Jaunsár, Hari Swarup I in Dehra Dún and Pirbhu Lal and Pancham Singh in Sahâranpur Foresters Akbar Ali, Murad Ali (since deceased), Dharam Singh and Madho Ram have also done well *

76 *Office Establishment*—As already stated, the Conservator hopes and trusts that the Government will favourably consider his recent proposals for the improvement of this important part of the staff.

It is surely bad policy to have Divisional Officers, who ought to be travelling and working in the forests, tied down to headquarters or their tents in camp by having themselves to do account work, which can easily be done by office clerks, and the outcome of this in the tendency to make Range Officers do more and more of the office work of the Divisional Office staff is not a satisfactory feature A Range Officer should be constantly about in his charge, and the account and correspondence work required of him should be reduced to the minimum possible So, too, a Divisional Officer should make his inspections frequently and often and should not be allowed the excuse for staying at headquarters of press of office work There would be no need for office work if there were no work in the field! It is hoped that the revised Forest Code which is shortly expected will reduce office business

The Conservator acknowledges the assistance of his office staff, and especially of the head and 2nd clerks.

77 *Reorganization of Executive Staff*—Orders on this are shortly expected, and as already applied for, the Conservator hopes it will be possible to allot to his circle one at least of the Sub-Assistant Conservators sanctioned for the North-Western Provinces and Oudh, and that a larger number of Rangers will be also made available for the School Circle The chief difficulty is to find good native candidates for forest rangerships and the school training Coming from a province where applications from qualified candidates were daily received, the Conservator has been much struck by the extremely small number of such applications received in his circle He thinks that something may be due to ignorance of the department and its prospects, something to the tendency of education to be literary and not scientific, most to a dislike of outdoor employment, and a preference for sedentary work even with less pay.

78 *The health*—Of the staff has been fairly good on the whole during the year

79 The reports for 1890 on the Sahâranpur "raus" have been submitted There is evidence to show that on both sides of the Siwaliks a gradual improvement is perceptible in the growth of plants on torrent beds, while the Himalayan torrents are gradually getting worse and worse During the year, a series of photographs of the Sahâranpur torrents were taken and submitted to Government with the levels showing the changes in the beds of the streams at fixed points Owing to the inaccuracy of the long series of rainfall statistics, it is proposed in future to limit them to a few central stations only. In Dehra Dun Division, the rainfall statistics have hitherto been under the Forest School, and have consequently been reported on if at all, in the School Annual Report In future it will be much better to have all such works supervised by Divisional Officers, and the Conservator proposes during the current year to organize these statistics on a better and more suitable system, and to extend observations to all range headquarters where possible He has lately inspected the registers of Deoban

* *Note*—Since this was written the proposals have been partially sanctioned.

and Deota, and thinks that the record of the last six years at the latter, which has never yet been published, will be useful :—

Month.	1885-86.	1886-87.	1887-88	1888-89.	1889-90	1890-91	Average of six years	Remarks
April	4 00	0 55	1 00	1 20	1 80	3 90	2 08	
May	4 55	2 88	...	2 00	1 50	1 40	2 05	
June	6 08	4·04	0 50	3 95	4 95	1 55	3 66	
July	6 42	10 79	14·64	9·80	18 85	13 45	12 32	
August ...	17 61	9 40	18 32	13 03	19 30	13 15	15 13	
September ...	3 35	1 29	1 45	10 78	1 50	7 25	4 25	
October ...	0 38	0 62	0 65	0 70	*Nil*	0 25	0 43	
November ..	*Nil.*	0 30	*Nil.*	2 20	*Nil.*	0 15	0 44	
December ...	*Nil.*	1 65	*Nil.*	*Nil*	*Nil*	1 75	0 56	
January ...	4 23	3 55	2 00	4 00	1 40	0 80	2 83	
February ...	2 50	*Nil.*	1 10	8 35	1 05	5 30	3 03	
March	4 78	1 80	2 40	0 40	1 60	4 40	2 73	
Total ...	53 90	37 77	42·06	56·41	51 95	53 35	49 54	

The rainfall at Dehra Dún in 1890 was 86·10 inches at the Forest School, the average of the last 24 years at the Trigonometrical Survey Office being 86·27.

J. S. GAMBLE,

Conservator of Forests, School Circle,
N.-W. Provinces and Oudh.

DEHRA DÚN :
June 20th, 1891.

NOTES ON FIRE CONSERVANCY

AND

ANNUAL STATEMENTS.

APPENDIX I.

PROTECTION OF FORESTS FROM FIRE, 1890-91.

THE fire conservancy operations of the past and previous years compare as follows —

Division		Area in which protection was attempted	Area actually protected	Failures	Percentage of failures to area actually protected	Cost during the year	Cost per acre of area actually protected
		Acres	Acres	Acres		Rs	Pies
Dehra Dun	1889-90	158 157	153 860	4,297	2 79	2,813	3 51
	1890 91	158,354	158,309	45	03	*2,494	3 02
Sahâranpur	1889 90	143 899	129,973	13,426	10 33	2 066	3 05
	1890 91	142,878	142,556	322	0 23	*1,841	2 48
Jaunsâr	1889 90	98,709	97,413	1,296	1 33	1,489	2 93
	1890-91	102,018	102,010	8	006	1,082	2 04
Total	1889 90	400 265	381,246	19,015	4 98	6,368	3 20
	1890 91	403,250	402 875	375	09	5,417	2 58

* Including Rs 70 and Rs 360, respectively given, as rewards

2 The season of 1890-91 has been an unusual one Throughout the early months of 1891 there was a considerable amount of rain at intervals, but at the end the monsoon failed, and the rains cannot be said to have properly set in till 24th July 1891 The following is the amount of rain received at Dehra Dun during the period September 1890 to July 1891, inclusive —

		Amount	Chief falls
September	1890	4 61	
October	"	0 32	
November	"		
December	"	1 65	
January	1891	2 97	8th, 17th, 18th 23rd, and 24th
February	"	2 41	3rd, 21st and 22nd, 26th and 27th
March	"	1 80	6th, 11th to 14th, 21st, 27th
April	"	0 35	28th and 29th
May	"	1 33	8th and 9th, 23rd, 25th (1 inch)
June	"	3 49	4th, 6th to 8th, 30th (1 03 inch)
July	"	14 10	3rd to 5th (2 09 inches), 12th to 15th (3 38 inches), 22nd, 23rd (0 34 inch), 24th (4 93 inches), then monsoon

The rainfall of Sahâranpur Division was considerably less than this, and that of Jaunsar was also generally less, though the showers came at about the same intervals The result of these meteorological conditions was that though the occasional showers were largely instrumental in decreasing both the frequency of, and the damage done by, the forest fires, yet the season was a very prolonged one, and up to the 24th July it was unsafe to dismiss the fire patrols and feel assured that protective measures were no longer necessary. So, too, the winter falls of rain in the plains and the heavy and late snow falls in the hills prevented the clearing and burning of fire lines being even begun before April, and the students of the Forest School had consequently this year to forego their usual instruction in the subject.

3 The general result of the year must be set down as very successful, probably as the most successful yet recorded, and had it not been for a tolerably big fire at the very end of the season in the Dún and Sahâranpur Siwaliks, the area reported as burnt would have not been more than 32 acres

4. The returns of the year compared with those for 1890, show favourable results :—

I.—Increase in area attempted		2,985	acres.
II. Ditto protected		21,629	„
III.—Percentage of total forest area under protection (77 48%)	increase	·71	per cent.
IV —Increase in expenditure		951	Rs.
V —Percentage of failures to area actually protected ·09	decrease	4 89	per cent.
VI —Area attempted in hills, 102,018	increase	3,309	acres.
VII. Ditto plains 301,232	decrease	324	„
VIII —Cost per acre attempted, 2 58 pies	do.	·47	pies.
IX. Ditto protected, 2 58 pies	do.	·62	„
X. Ditto of hill forest attempted 2 04 pies ...	do.	·86	„
XI. Ditto of plains forest attempted, 2 76 pies ...	do.	·34	„

5. The changes in the areas under protection are summarized as follows :—

Additions.

	Acres.
Dehra Dún, Ganges range, Johra block	197
Saháranpur, Central range, Lalwála do.	70
Jaunsár, Deoban range, Marauwa do.	208
Ditto ditto Ekra do.	375
Ditto ditto Kulored do.	432
Ditto ditto Aulokri do.	118
Ditto, Bawar range, Obra do.	250
Ditto ditto Kunigad and Utasna block	570
Ditto ditto Ninus ditto do.	150
Ditto ditto Banadhar ditto do.	230
Ditto ditto Maura and Sangrani do.	150
Ditto, Deoban range, net addition, due to adoption of areas given in the working plan	963
Total ...	3,733

Exclusions.

Saháranpur Division, Eastern range, Pathri forest	591	
Jaunsár Division, Deota range, Kunigad do	157	
		748
Net increase		2,985

Mr Moir reports that the new areas in the Jaunsár Division are, as a rule, situated well away from villages and no serious complaint has been made as regards the socalled hardships due to their closing from fire.

6. In the Pathri forest 591 acres were excluded, the fire protection of the plantation having been alone ensured. In the Jaunsár Division the area of 157 acres in the upper portion of the Kunigad forest of the Deoban range was excluded from special protection, with the object of having the position of the fire line changed, as it was difficult to construct it in its former position. The effects of fire protection on the floods in the Siwaliks have been the subject of special experiments, and a separate report on the subject has been submitted.

7. The cost of fire protection in each division was as follows :—

Division		Area actually protected.	Percentage of total forest area protected.	Length of fire lines	Cost. Clearing lines.	Burning lines	Fire watchers.	Extinguishing fires, &c.	Total	Per acre.
		Acres.		Miles	Rs	Rs	Rs.	Rs.	Rs	Pies.
Dehra Dún ...	Average of previous 11 years,	76,715	..	..	...	...	..	...	3,812	9·54
	1889-90	153,860	97·28	348	641	805	1,268	99	2,813	3·51
	1890-91	158,309	99 97	350	559	722	1,128	85	2,494	3 02
Saháranpur ...	Average of previous 11 years,	61,198		...	...	...	...	.	2 372	7·44
	1889-90	129,973	90·63	99	319	183	1,362	202	2,066	3 05
	1890-91	142 556	99·78	121	354	132	985	370	1,841	2 48
Jaunsár ...	Average of previous 11 years,	75,810	...	..	...	...	...	.	1,341	3 40
	1889-90	97,413	98·69	352	45	1,131	174	139	1,489	2·93
	1890-91	102,010	99 99	368	87	808	169	18	1,082	2·04
Total ...	Average of previous 11 years,	213,723	.	...	..	...	...	...	7,525	6 76
	1889-90	381,246	95·24	799	1,005	2,119	2,804	440	6,368	3 20
	1890-91	402,875	99·90	839	1,000	1,662	2,282	473	5,417	2·58

The cost is lower than usual in all the divisions, while the cost for the circle has been reduced from 3·20 to 2·58 pies per acre.

8. The area burnt during the last fire season was 375 acres as compared with 19,019 acres burnt in the previous year. The causes of the different fires may be classified under the main heads as below :—

Year.	I		II		III		IV		V		VI		VII		VIII	
	By forest establishment when burning fire lines, &c.		Fires which entered the forests by crossing exterior fire lines.		By workmen not in forest employ, by accident.		By villagers, travellers, or soldiers, by accident.		Fire caused by lightning		Fires maliciously lighted inside the forests		Causes unknown.		Total.	
	No.	Area in acres.	No.	Area in acres	No.	Area in acres	No.	Area in acres.	No.	Area in acres	No.	Area in acres	No.	Area in acres.	No.	Area in acres
1890-91 ...	1	1	1	10	1	3	3	8	1	8		...	3	345	10	375
1889-90 ...	10	1,441	4	6,568	4	281	8	1,842	.	...	3	7,172	7	1,715	36	19,019
1888-89 ...	1	2	4	18,697	1	1	10	1,089½	..	...	5	10,825	1	125	22	31,639½
1887-88 .	9	2,506	1	7,756	1	410	10	357	1	263	3	4,163	10	3,303	35	18,758
1886-87 ...	10	2,349	1	26,560	...	...	6	438	..	...	9	8,021	9	328	35	37,696

9. The following table gives the details of the 10 fires which occurred during the year :—

No.	Range.	Block.	Date of fire.	Year of protection.	Area burned	Remarks as to cause of fire.
			DEHRA DÚN DIVISION.		acres.	
1	Tirsál ...	Ghamandpur ...	15th February 1891,	1887 ...	10	Fire crossed from zamíndári land, fire lines not having been burnt for wet weather
2	Rámgarh ...	Assarori ...	25th June 1891 ...	1878 ...	35	Cause unknown, same as No. 4 of Saháranpur.
				Total ...	45	
			In 1889-90 14 fires extending over	...	4,297	
			SAHÁRANPUR DIVISION.			
1	Eastern ...	Ránipur ..	27th April 1891 ...	1886 ...	4	Caused by an insane woman cooking her food in the forests while on her way from Hardwár fair
2	Western ...	Kaluwála ...	3rd May 1891 ..	1887 ...	2	Caused by a man trying to take honey
3	Central ...	Dholkhand ...	8th May 1891 ...	1879 ...	8	Caused by lightning
4	Do. ..	Sukh Chilawála ...	25th June 1891 .	1882 ..	300 8	Cause unknown, same as No. 2 of Dehra Dún.
				Total ...	322	
			In 1889-90 14 fires extending over	.	18,426	
			JAUNSÁR DIVISION.			
1	Bawar	Majbirra ...	15th November 1890,	1872 ...	2	Cause unknown, supposed to have been a shikári
2	Deota .	Molta ...	5th March 1891 ...	1870—84...	1	Carelessness of forest guard, &c., whilst burning fire lines Forest guard fined
3	Deogarh ...	Chandnigadh ...	11th April 1891 ...	1872—75 ..	3	Carelessness of contractor's coolies at work in the forest The men were fined and the contractor called on to pay all expenses.
4	Bawar .	Panchkoti ...	9th July 1891 ..	1875 ...	2	Carelessness of three small boys grazing cattle
				Total ...	8	
			In 1889-90 16 fires extending over	..	1,296	
			GRAND TOTAL FOR THE CIRCLE	...	375	
			DITTO 1889-90	...	19,019	

10. Thus it will be seen that the only fire of any magnitude was that which burnt 343 acres of Siwalik country in the Dehra Dún and Saháranpur Divisions. The Dún officers say that the fire came to them from the Saháranpur Division, and this is probably true; the Saháranpur officers say it came from the Dún; the most probable thing being that it was lit in the Saháranpur hills by some grazier or woodcutter, who was not caught. It might, however, have been caused by lightning, and so it has been entered as 'cause unknown,' instead of under incendiarism.

11. One noticeable feature of the year is the number of authentic cases of fire being caused by lightning. The Saháranpur Divisional Officer reports *three*—one in Sháhjahánpur block on April 27th, which, however, was at once extinguished by rain; another on the waterparting above Ránipur, which was put out by men who saw the tree struck and the fire begin; and the third in Dholkhand, in which 8 acres were burnt over and which was distinctly traceable to the burnt tree. In Dehra Dún Division *one* authentic case is recorded of a chír tree on the Siwalik crest being struck in the presence of a forest guard and some coolies, who immediately extinguished the fire, which had been communicated to the grass. The Jaunsár Divisional Officer reports *three* cases—one on April 28th, when a chír tree at Chatragadh was struck and the grass ignited, the fire was immediately extinguished by a forest guard who was near at hand; a second at Lambatách on May 22nd, a few days before the Conservator's visit to the place, where a kail tree on the forest edge was struck and ignited, but the fire put out; and a third on May 23rd, when a deodár tree at Kotigad was struck and the grass lit; it was at once extinguished by sawyers working in the neighbourhood. Thus there were *seven* recorded cases of fire caused by lightning and this leads one to suspect that many of the fires which are ordinarily put down to 'accident' (which should usually really be 'incendiarism') may have been due some to lightning and some possibly to spontaneous combustion in heaps of more or less damp grass.

12. The Divisional Officers note the good effects of the orders of G. O. No. 462F of 20th June 1889 and of 349F of 2nd May 1891. But what has most astonished the Conservator is the fact that while Government has so clearly shown its great interest in the fire protection of the forests and made rules which go so far as to make neighbouring owners responsible for any damage which may be traced to their carelessness, it has for years tacitly allowed much of its own reserved forests in Jaunsár to be systematically burnt. The Divisional Officer reports on this as follows:—

"As regards the areas of 2nd class forest in Jaunsár, which for certain reasons "the villagers are allowed to fire if they feel inclined to do so, the following is a rough "estimate of the areas which from natural causes may be said annually to escape "altogether from burning; but it should be noted that those areas vary much from "year to year according to the season, and no very reliable statement can be given:—

Range	Area not fire protected.	Probably not burnt.	Remarks.
Deoban	4,442	1,986	Estimated by Forest Ranger.
Bawar	10,320	1,520	Ditto ditto
Deota	7,974	1,800	Ditto ditto.
Deogarh	5,020	1,010	Ditto ditto.

"Of the remaining area it is probable that only about the half is entirely "burnt and the balance partially so. All these unprotected areas consist of the least "valuable and unimportant portions of the 2nd class oak and chír forest or of "precipitous ground which is not worth protecting and to the firing of which the "villagers attach great importance."

With Mr. Moir's opinion that any oak and chír forest that it has been deemed advisable to make reserved forest for the supply of wood, grass, and other material and of

grazing, or that any precipitous slopes whose protection is desired to prevent denudation, *are not worth protecting*, the Conservator entirely disagrees, while he acknowledges Mr. Moir's experience and interest in conservancy. If an area is worth reserving at all, for any reason, it is worth protecting; and when on tour in Jaunsár lately he could not but feel astonished at seeing large areas of blackened stems and stumps of trees and large patches of brown denuded soil, the result of fires burnt under the eyes of the Forest Officers. No doubt it is true that the villagers imagine that burning improves the grass, but the Conservator is of opinion that the contrary is really the fact, and that the burning has the effect of destroying the tender succulent annual grasses while encouraging the growth of the coarse rough *Andropogous*, *Anthistirias*, and *Saccharums*, which are scarcely edible except in the condition of fresh green shoots. There is ample grazing land in Jaunsár, and the number of cattle kept in the villages is by no means excessive, so that it seems strange that during more than 20 years of reservation we should have done so little to teach the villagers their mistake and to stop the yearly fires which are now, it is satisfactory to note, almost, if not quite, universally condemned in India. The Conservator looks upon the areas referred to as being by no means 'of small value and unimportant,' but as constituting a valuable grazing or fodder reserve capable when necessary not only of feeding the cattle of Jaunsár, but of supplying excellent pasture and, if needs be, cut fodder or hay for more distant areas; and if this fodder reserve is to be maintained in its best condition it must be protected, and good grasses encouraged, with a sufficiency of tree vegetation to assist in maintaining freshness.

DEHRA DÚN,
The 3rd August 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle,
N.-W. P. and Oudh.

FOREST DEPARTMENT, SCHOOL CIRCLE.

AREA OF RESERVED, LEASED, PROTECTED

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st April 1890. Acres.	Equivalent in square miles.
			I.—Reserved Forests.		
Dehra Dún ...	Jumna ...	Dehra Dún	Ambari	4,203	7
			Chándpur	2,251	3
			Jumna	9,130	14
			Timli	19,704	31
	Malhán ...	Ditto	Sherpur	13,922	22
			Chandrabani	7,280	11
			Dholkot	4,810	8
	Rámgarh ...	Ditto	Rámgarh	10,482	17
			Bulawála	14,965	23
	Lachiwála ...	Ditto	Nagsidh	17,055	27
			Malkot	5,941	9
			Thano	6,576	10
	Tirsal	Ditto	Tirsal	18,072	28
			Taposan	489	1
			Birbhaddar		
	Ganges... ...	Ditto	Kanerao	20,402	32
			Motichur	22,073	34
			Total, Dehra Dún Divn. ...	177,064	277
Saháranpur ...	Western ...	Saháranpur	...	81,860	128
	Central ...	Ditto	...	74,961	117
	Eastern ...	Ditto	...	31,743	50
			Total, Saháranpur Divn ...	188,564	295
Jaunsar ...	Deoban ...	Dehra Dún	Kalsi	4,508	7
			Strips on Jumna and Tons ...	422	1
			Singori, Kua, Korwa, Kotha, Bandla and Raura ...	787	1
			Anláwa	285	...
			Lokandi	6,839	10
			Deoban	6,580	10
			Ekra	5,313	8
			Karamba	11,842	19
			Konain	4,654	7
	Bawar	Ditto	Biknar	6,450	10
			Dharagadh	13,540	21
			Dharmigadh	10,013	16
	Deogarh ...	Ditto	Bastil	3,085	5
			Deogarh	11,272	18
			Khunigadh	11,974	19
			Total, Jaunsar Divn. ...	97,124	152
			GRAND TOTAL of RESERVED FORESTS ...	462,752	724
			II.—Leased Forests.		
	Deogarh ...	Panjáb Hill States ...	Raiengarh	5,425	9
			Dadi including Ori ...	1,630	2
	Deota ...	Tehri Garhwál ...	Deota	4,937	8
			Bamsú	2,323	4
			Surás	1,014	2
			Dátmir	2,560	4
	Kotigadh ...	Ditto	Naintwar	3,000	5
			Sahira	22,000	34
			Noranu		
			Chansil		
			Lambatách	2,883	4
			Kotigadh	3,968	6
			Total, Leased Forests ...	49,740	78

[Form No. 49.

N.-W. PROVINCES AND OUDH.

AND UNCLASSED STATE FORESTS, 1890-91.

Added during the year.	Excluded or transferred to other heads	Area on 1st March 181 .		Number and date of Notification of addition or transfer	Remarks.
Acres.	Acres.	Acres.	Equivalent in square miles		
...	...	4,203	7		
...	...	2,251	3		
...	...	9,130	14		
...	...	19,704	31		
...	...	13,922	22		
...	...	7,260	11		
...	...	4,810	8		
...	...	10,482	17		
...	...	14,065	23		
...	...	17,055	27		
...	...	5,641	9		
...	...	6,576	10		
...	...	18,072	28		
...	...	489	1		
...	...	20,402	32		
...	...	22,073	34		
...	...	177,064	277		
...	...	81,860	128		
...	...	74,961	117		
...	...	31,743	50		
...	...	188,564	295		
...	...	4,568	7		
...	...	422	1		
...	...	787	1		
...	(a)285	...	...	...	(a) Included in the area of the Kalsi forest
...	(b)91	6,248	10	G O No $\frac{17F}{687-14}$, dated 9th January 1891.	(b) Area abandoned at Chatri forest as per G. O No $\frac{17F}{687-24}$, dated 9th January 1891, Acres. 727 Formerly excluded in Form No. 49 for 1887-88 ... ... 636 Balance ... 91
...	...	6,580	10		
...	...	5,313	8		
...	...	11,842	19		
...	...	4,664	7		
...	...	6,460	10		
...	...	13,540	21		
...	71	9,942	15	G O No $\frac{140F}{298A}$, dated 18th February 1891.	
...	...	3,085	5		
...	496	10,776	17	G. O No. $\frac{894F}{8a4}$, dated 22nd December 1890.	Abandoned and made over to Taroche State.
...	...	11,974	19		
...	...				
...	943	96,181	150		
...	943	461,800	722		
...	...	5,425	9		
...	...	1,630	2		
...	...	4,937	8		
...	...	2,323	4		
...	...	1,014	2		
...	...	2,560	4		
...	...	3,000	5		
...	...	22,000	34		
...	...	2 883	4		
...	...	3,968	6		
...	...	49,740	78		

FOREST DEPARTMENT, SCHOOL CIRCLE,

AREA OF RESERVED, LEASED, PROTECTED

Division	Range	Civil District or Territory	Name of Forest.	Area on 1st April 1890	
				Acres	Equivalent in square miles
			III.—Protected Forests.		
			Nil		
			IV.—Unclassed State Forests.		
Jaunsár ...	Deoban ...	Dehra Dún	Chakráta Cantonment Forests comprising—		..
			Lurli and Sotoli ...	290	..
			Forest Garden , ..	188	...
Dehra Dún ...	...	Ditto ...	Waste lands available for cultivation	48 8,206	13
			Total, Unclassed State Forests,	8,732	13
			GRAND TOTAL OF FOREST LAND	521,224	815

Abstract of Changes

Area at commencement of year ... ...
Added during the year ... .

Excluded during the year ... .

Total ...

FOREST DEPARTMENT, SCHOOL CIRCLE,

REGISTER OF BREACHES OF

Forest Division		Cases pending from 1890 91	New cases of the year					Total cases.
			Injury to forest by fire	Unauthorised felling or appropriation of wood and minor forest produce	Grazing without permission, or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year	
Dehra Dún	A	...	3	...	1	2	6	6
	B		4	22	1	1	28	28
	C	...	.	...	..	...		
Sahárunpur	A		3	1	...		4	4
	B	..	...	10	7	...	17	17
	C	.		...		...	..	...
Jaunsár	A		1	2	.	5	8	8
	B.		3	18	14	9	44	44
	C		...	...	...	...	...	...
GRAND TOTAL .	A		7	3	1	7	18	18
	B		7	50	22	10	89	89
	C.	...	..	...	...	...	...	...

N B—A means cases taken into Court
B means cases disposed of under section 67 of Indian Forest Act, 1878.
C means undetected cases

DEHRA DÚN:
The 20th June 1891.

[Form No. 49.

N.-W. PROVINCES AND OUDH.

AND UNCLASSED STATE FORESTS, 1890-91—*(concluded)*.

Added during the year.	Excluded or transferred to other heads	Acres on 1st March 188 .		Number and date of Notification of addition or transfer.	Remarks.
Acres.	Acres.	Acres.	Equivalent in square miles.		
...	...	290	...		
...	...	188	...		
...	...	48	...		
162	...	8,368	13		Increase due to more accurate measurements.
162	...	8,894	13		
162	943	520,443	813		

during the year.

			Acres
..	...	...	521,224
...	...	...	162
			521,386
...	...	...	943
...	...		
...	...	...	520,443

[Form No. 50.

N.-W. PROVINCES AND OUDH.

FOREST RULES DURING 1890-91.

Disposed of during the year.						Cases pending at close of year.	Remarks.
Convictions.		Acquittals.		Total.			
Cases.	Persons.	Cases.	Persons.	Cases.	Persons.		
5	8	1	1	6	9	...	
23	122	5	7	28	29	...	
...	...	...	...	...	...	...	
4	6	...	...	4	6	...	
17	61	...	...	17	61	...	
...	...	...	...	...	...	...	
6	12	2	2	8	14	...	
44	74	...	...	44	74	...	
...	...	...	...	...	...	...	
15	26	3	3	18	29		
84	257	5	7	89	264		
...	...	...	...	...	...		

J. S. GAMBLE,

Conservator of Forests, School Circle, N.-W. P. and Oudh.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH. [Form No. 51.

AREA OF FOREST TRACTS PROTECTED FROM FIRE DURING THE DRY SEASON OF 1891, TO ACCOMPANY REPORT FOR 1890-91.

Division.	Forest tracts.	Year in which protection commenced.	Area actually protected up to 15th June 1890.	During dry season of 1891.			Cost during the season.	Remarks.
				Area attempted to be protected.	Failures.	Actually protected.		
			Acres.	Acres.	Acres.	Acres.	Rs.	
	Jumna Range.							
Dehra Dún ...	Ambári ...	1887	4,203	4,203	...	4,203	75	
	Chandpur ...	1887	2,251	2,251	...	2,251	103	
	Jumna ...	1886	8,305	8,305	...	8,305	98	
	Timli ...	1884	18,304	19,704	...	19,704	206	
	Total ...	...	33,063	34,463	...	34,463	482	
	Malhan Range.							
	Dholkot ...	1884	4,730	4,810	...	4,810	122	
	Sherpur ...	1884	13,922	13,922	...	13,922	121	
	Chandrabani ...	1878	7,283	7,289	...	7,289	110	
	Total ...	...	25,935	26,021	...	26,021	353	
	Ramgarh Range.							
	Rámgarh ...	1878	10,232	10,232	35	10,197	192	
	Bulawala ...	1872	14,522	14,525	...	14,525	129	
	Total ...	...	24,754	24,757	35	24,722	321	
	Lachiwala Range.							
	Nágsidh ...	1883	13,32	13,393	...	13,393	201	
	Thano ...	1877	6,576	6,576	...	6,576	146	
	Malkot ...	1888	5,621	5,641	...	5,641	46	
	Total ...	...	25,559	25,610	..	25,610	398	
	Ganges Range.							
	Kansrao ...	1878-81	13,877	14,657	...	14,657	369	
	Motichur ...	1883	18,437	*18,960	...	18,960	160	* Area increased by 197 acres in Johra block in addition to 95 acres previously protected.
	Total ...	...	32,314	33,617	...	33,617	529	
	Tirsal Range.							
	Tirsal ...	1887	12,185	13,836	10	13,826	402	
	Burbhaddar ...	1888	50	50	...	50	14	
	Total ...	...	12,235	13,886	10	13,876	416	
	Total, Dehra Dún Division ...	...	153,860	158,354	45	158,309	2,494	

	Western Range.							
Sahéranpur ...	Khára ...	1879	9,612	9,612	...	9,612	78	
	Bádshahibágh	1885	7,066	7,066	...	7,066	69	
	Chapri ...	1885	2,765	2,765	...	2,765	42	
	Khaironwála	1885	2,970	2,970	...	2,970	42	
	Barkala ...	1885	5,133	5,133	...	5,133	27	
	Kasumri ...	1885	2,579	2,579	...	2,579	30	
	Sahenara ...	1885	6,048	6,048	...	6,048	37	
	Kotri ...	1885	2,669	2,669	...	2,669	54	
	Kaluwála ...	1885	5,116	5,116	2	5,114	12	
	Shíhjahánpur	1887	7,062	9,572	...	9,572	28	
	Khujnawar	1887	7,019	8,392	...	8,392	48	
	Budhaban ...	1887	3,771	3,771	...	3,771	30	
	Mohand ...	1884	6,131	6,131	...	6,131	104	
	Total ...	..	67,941	71,824	2	71,822	601	
	Central Range.							
	Sukh ...	1884	5,111	5,111	300	4,811	20	
	Chillawála ...	1882	7,782	7,782	8	7,774	5	
	Gaj ...	1882	3,578	3,578	...	3,578	5	
	Andheri ...	1882	5,719	5,719	...	5,719	12	
	Dholkhand ...	1880	3,916	3,916	8	3,908	13	
	Malowála ...	1880	2,122	2,122	...	2,122	5	
	Bám ...	1880	3,013	3,013	...	3,013	24	
	Betban ...	1882	6,781	6,781	...	6,781	47	
	Gholna ...	1886	3,283	3,746	...	3,746	27	
	Lálwála ...	1884—85-20	639	(a) 709	...	709	44	
	Banswála ...	1883	500	500	...	500	48	(a) New area, 70 acres.
	Lakarkot ...	1879	3,643	3,646	...	3,646	97	
	Ganjarban ...	1879	350	2,833	...	2,833	98	
	Rasulpur ...	1879	...	1,987	...	1,987	34	
	Sendhli ...	1883	381	2,560	...	2,560	116	
	Tira ...	1884	1,731	1,791	...	1,791	96	
	Total ...	...	48,549	55,794	316	55,478	691	
	Eastern Range.							
	Harnaul ...	1886	...	2,035	...	2,035	29	
	Chirak ...	1886	3,778	3,860	...	3,860	17	
	Rauli ...	1879	3,038	3,038	...	3,038	15	
	Bánipur ...	1879	4,885	4,885	4	4,881	51	
	Maisapur ...	1886	1,361	1,361	...	1,361	50	
	Pathri ...	1880	421	(b) 81	...	81	27	(b) Decrease, 591 acres.
	Total ...	..	13,483	15,260	4	15,256	189	
	Total, Sahéranpur Division ...	...	129,973	142,878	322	142,556	1,481	Not including Rs 360 given as reward to establishments.
	Deoban Range.							
Sahéranpur ...	Kalsi ...							
	Bairat ...	1872	2,298	4,568	...	4,568	...	
	Amláwa ...							
	Oak Forests, south of Chakráta ...	...	...	775	...	775	5	
	Cantonment blocks and Forest Garden	1880	561	526	...	526	9	
	Lokandi ...	1869	5,711	5,580	...	5,580	40	
	Deoban ...	1872	5,800	5,600	...	5,600	42	
	Ekra ...	1872	2,670	3,236	...	3,236	25	
	Konain ...	1872	2,780	3,923	...	3,923	23	
	Karamba ...	1872	3,621	2,050	...	2,050	19	
	Total ...	...	23,441	26,258	...	26,258	163	

[Form No. 51

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH.

AREA OF FOREST TRACTS PROTECTED FROM FIRE DURING THE DRY SEASON OF 1891, TO ACCOMPANY REPORT FOR 1890-91—(*concluded.*)

Division.	Forest tracts.	Year in which protection commenced.	Area actually protected up to 15th June 1890.	During dry season of 1891.			Cost during the season.	Remarks.
				Area attempted to be protected	Failures.	Actually protected.		
			Acres.	Acres.	Acres.	Acres.	Rs.	
Jaunsár—(*concluded*)	**Bawar Range.**							
	Riknar ...	1872	4,900	5,470	2	5,468	73	
	Dharagadh	1872	6,054	6,455	...	6,455	60	
	Dharmigadh	1872	2,676	3,076	...	3,076	50	
	Bastil	1875	1,669	1,669	2	1,667	36	
	Khunjawar	1884	90	100	...	100	11	
	Total ...		15,389	16,770	4	16,766	230	
	Deota Range.							
	Khunigadh ...	1879—84	4,054	4,000	1	3,999	209	
	Molta ...							
	Chatra ...							
	Hanol ...	1879—84	4,936	4,937	...	4,937	110	
	Deota ...	...	2,323	2,323	...	2,323		
	Bamsu ...	...	954	1,014	...	1,014		
	Suras ...	1872	2,560	2,560	...	2,560	12	
	Datmir ...	1885	2,910	3,000	...	3,000	31	
	Naintwar ...	1885	7,500	7,500	...	7,500	37	
	Sálhra ...	1885	1,500	1,500	...	1,500		
	Noranu ...							
	Total ...		26,737	26,834	1	26,833	399	
	Deogarh Range.							
	Deogarh ...	1872—75, 1886—87	4,840	5,150	3	5,147	105	
	Raiengarh ...	1880	5,425	5,425	...	5,125	7	
	Dadi ...	1880	1,730	1,730	...	1,730	23	100 acres of undemarcated chir forests also protected.
	Total ...	...	11,995	12,305	3	12,302	135	
	Kotigadh Range.							
	Chansil ...	1885	13,000	13,000	...	13,000	40	
	Kotigad ...	1879	3,968	3,968	...	3,968	25	
	Lambatach	1879	2,883	2,883	...	2,883	90	
	Total ...	...	19,851	19,851	...	19,851	155	
	Total, Jaunsár Division ...	...	97,413	102,018	8	102,010	1,082	
	GRAND TOTAL FOR THE CIRCLE ...	...	381,246	403,250	375	402,875	5,057	

DEHRA DUN:
The 3rd August 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle, N.-W. P. and Oudh.

[Form No. 52.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH.

AREA OF PLANTATIONS, 1890-91.

Division.	Name of plantation.	Area in acres. On 1st April 1890-91.	Added during the year	Excluded during the year.	Area on 31st March 1891.	Receipts of the year.	Charges of the year.	Total charges up to 31st March 1891.	Remarks.
		Regular Plantations.							
		Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	
Saháranpur.	Firozpur (chiefly sissu) (in Pathri forest)	80½	...	...	80½	...	99	1,196	
	Total ...	80½	...	...	80½	...	99	1,196	
		Cultural Operations.							
Dehra Dún.	Phandowála (tún—Broussonetia)	5½	...	...	5½	...	...	6,433	
	Johra (bamboo and Parduni nursery)	86	...	...	86	...	74		
	Total ...	91½	...	...	91½	...	74	6,433	
Sahá-ranpur.	Ganjarban (sál, &c) ...	11½	...	11½	...	...	...	847	
	Ránipur (bamboos) ...	13½	...	13½	...	...	5	1,329	
	Bam (sál, &c)	8½	...	8½	...	...	...	731	
	Sendhli (ditto)	8	...	8	...	...	...	640	
	Carried forward ...	41½	...	41½	...	...	5	3,547	
	Brought forward ...	41½	...	41½	...	...	5	3,547	
Sahá-ranpur.	Gáj (sissu)	...	...	*	...	...	11	214	*Struck off.
	Dhaula (sál)	3	...	3	...	...	3	105	
	Lakarkot (compartment No. 4, Miscellaneous) ...	...	...	...	...	...	...	...	
	Total ...	44½	...	44½	...	...	19	3,866	
Jaun-sár.	Korwa (cihr, kail, ban, &c) ...	25	..	10	15	...	41	357	No plants available for further extensions. Sowing failed, 10 acres of plantation of 1887 excluded as failure.
	Mohna (rai, deodár, kharsu) ...	187	5	...	192	...	145	3,999	
	Matkangra (moru and deodar)	74	...	...	74	...	31	952	
	Hajáwa (rai sowings) ...	8	...	...	8	...	20	115	
	Thona (rai, kail, kharsu) ...	4	...	...	4	...	...	733	
	Kanjatra (rai, kail, morinda)	22	...	...	22	...	36	704	
	ditto (deodár and kail) ..	9	...	...	9	...			
	Kanasar (ditto) ...	139	...	...	139	...	8	1,564	
	Bodyár (chiefly deodár) ...	415	...	...	415	...	115	5,321	
	Kathan (deodár) ...	251	4	...	255	...	44	3,200	
	Konain (chiefly deodár) ...	122	...	...	122	...	15	2,480	
	Pánchkoti (deodár) ...	5	6	...	11	...	53	81	
	Mundali (do.) ...	31	5	...	36	...	211	493	
	Partil (do.) ...	48	...	...	48	...	50	1,085	
	Jaurasi (do.) ...	15	...	...	15	...	35	331	
	Temple (do.) ...	31	...	...	31	...	5	191	
	Goria (do.) ...	10	3	...	13	...	30	154	
	Dampti (deodár, and kail) ...	100	...	...	100	...	...	983	
	Chakora (deodár)... ...	34	...	...	34	...	...	346	
	Gurasna (do.)	2	...	...	2	...	...	90	
	Ola block (deodár sowing) ...	64	4	...	68	...	104	441	
	Mursch (deodár)... ..	16	...	...	16	...	...	466	
	Raisengarh Chachpur (deodár),	17	3	...	20	...	90	655	
	Lurli Cantonment (do.)	75	...	...	75	...	21	1,548	
	Sutoli do. (do.)	22	...	...	22	...	...	508	
	Thanwar	...	6	...	6	...	57	57	
	Total ...	1,726	36	10	1,752	...	1,111	26,954	
	Total Cultural Operations for the Circle	1,862½	36	54½	1,843½	...	1,204	37,253	

DEHRA DÚN,
The 20th June 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle, N.-W. P. and Oudh.

[Form No. 52A.

FOREST DEPARTMENT, SCHOOL CIRCLE, N. W. PROVINCES AND OUDH.

AREA OF PLANTATIONS, 1890-91.

Division.	Name of plantation.	Area in acres. On 1st April 1890.	Added during the year.	Excluded during the year.	Area on 31st March 1891.	Receipts of the year.	Charges of the year.	Total charges up to 31st March 1891.	Remarks.
Dehra Dún			**Climber cutting.**			Rs.	Rs.	Rs.	
Rámgarh range ...	Bulawála ...	3,905	700	...	4,305	...	50	357	
	Rámgarh ...	6,332	..	...	6,332	...	...	409	
Lachiwála " ...	Thano ...	6,222	500	...	6,722	...	69	536	
	Dudhli ...	1,675	...	...	1,675	...	...	140	
	Lachiwála ...	1,493	750	...	2,243	...	153	284	
Ganges " ...	Bahora ...	6,093	...	...	6,093	...	...	448	
	Kanarso, Jamankhata and Partitungar ...	...	630	...	630	...	164	164	
Tiráli " ...	Tiráli (Barkot) ...	1,970	25	...	1,995	...	9	272	
	Do. (Sainkot) ...	374	...	...	374	...	...	86	
	Do. (Ghamandpur) ...	...	790	...	790	...	151	151	
Malhan " ...	Chandrabani ...	8,258	...	...	8,258	...	...	732	
	Dholkot ...	75	...	...	75	...	...	3	
	Sherpur ...	1,200	...	...	1,200	...	...	98	
Jumna " ...	Timli ...	5,389	1,200	...	6,589	...	50	375	
	Rámpur Mandi ...	80	...	...	80	...	...	43	
	Kulhál ...	320	...	...	320	...	...	28	
	Aldwála ...	1,760	...	...	1,760	...	...	211	
	Total ...	44,796	4,595	...	49,391	...	646	4,337	
Saháranpur.									
Central range ...	Lalwála, compartment No. I	70	...	...	70	...	...	23	
	Ditto ditto No. II	70	...	...	70	...	...	5	
	Lakarkot ditto No. V	600	...	...	600	...	...	13	
	Ditto ditto No. VII	683	...	...	683	...	...	44	
	Ganjartan block ...	1,600	...	...	1,600	...	...	64	
	Rasúlpur ...								
	Badshahibágh ...	45	...	...	45	...	...	10	
	Tira, compartment No. I,	...	80	...	80	...	12	12	
	Do., ditto II ...	...	75	...	75	...	12	12	
	Total ...	3,068	155	...	3,223	...	24	183	
Jaunsár. Dooban range ...	Haripur block, Kalsi forest.	640	...	...	640	...	...	57	
	Total for the Circle ...	48,504	4,750	...	53,254	...	670	4,577	
Dehra Dún.			**Cutting back of injured sal.**						
Rámgarh range ...	Bulawála ...	1,707	...	...	1,707	...	...	611	
	Asarori and Muhamadpur ...	2,143	...	...	2,143	...	...	1,702	
	Phandowála ...	900	1,500	...	2,400	...	711	1,419	
Malhan " ...	Chandrabani (Láldhánj),	1,423	...	...	1,423	...	...	914	
	do. (Karwápani),	300	735	...	1,035	...	425	515	
Lachiwála " ...	Nagsídh (Nawáda) ...	456	...	...	456	...	...	399	
	Do. (Dudhli) ...	...	882	...	882	...	845	845	
Tiráli " ...	Barkat ...	366	..	...	366	...	...	298	
	Sainkot ...	...	100	...	100	...	93	93	
Ganges " ...	Kanarso (Bahora) ...	...	425	...	425	...	174	174	
	Total ...	7,295	3,642	...	10,937	...	1,748	6,470	
			Girdling of inferior species.						
Jumna range ...	Jumna ...	2,350	1,200	...	3,550	...	77	526	
Malhan " ...	Malhan ...	1,960	...	...	1,960	...	...	676	
Rámgarh " ...	Rámgarh ...	1,000	730	...	1,730	...	76	606	
Lachiwála " ...	Lachiwála ...	1,900	100	...	2,000	...	11	419	
Ganges " ...	Ganges ...	3,000	200	...	3,200	...	41	486	
Tiráli " ...	Tiráli ...	500	970	...	1,470	...	59	138	
	Total ...	10,710	3,200	...	13,910	...	264	2,851	

[Form No. 52A.

FOREST DEPARTMENT, SCHOOL CIRCLE, N. W. PROVINCES AND OUDH.

AREA OF PLANTATIONS, 1890-91—*(concluded.)*

Division.	Name of plantation.	Area in acres. On 1st April 1890.	Added during the year.	Excluded during the year.	Area on 31st March 1891.	Receipts of the year.	Charges.	Total charges up to 31st March 1891.	Remarks.
	Girdling of inferior species to encourage deodar reproduction (before fellings).								
Jaunsár						Rs.	Rs.	Rs.	
Kotigádh range ...	Bunarpáni ...	140	...	...	140	...	...	68	
	Chakora ...	130	...	...	130	...			
Deota „ ...	Partil ...	200	...	...	200	...			
	Temple ...	95	...	...	95	...			
	Kanga ...	50	...	...	50	..			
	Patangni ...	70	...	...	70	...			
	Bamsu ...	466	...	...	466	...	...	1,247	
	Dakuri ...	1,482	...	...	1,482	...			
	Surás ...	...	1,014	...	1,014	...	227	227	Girdling and thinning blue pine, &c.
Bawar „ ...	Tutwa block, Mundali Forest ...	435	185	...	620	...	75	264	Ditto.
	Sangaret near Koti Bawar ...	72	...	...	72	...	...	42	
	Total ...	3,140	1,199	...	4,339	...	302	1,848	
	Thinning and girdling inferior species above young deodar growth (after fellings).								
Jaunsár.									
Bawar range ...	Kathian ...	409	...	...	409	...	49	99	130 acres gone over again.
	Thanwar ...	510	...	...	510	...			
Kotigádh „ ...	Chakora ...	457	...	...	457	...	74	455	80 acres gone over a second time.
	Lohasu ...	303	...	.	303	...			
	Gurasna ...	295	...	...	295	...			
	Bunarpáni ...	100	...	...	100	...	...	23	
	Kandar ...	...	14	...	14	...	12	12	
	Partil ...	358	...	...	358	...	...	238	
Deota „ ...	Temple ...	30	...	...	30	...	...	8	Thinning kail.
	Raiengarh ...	12	...	...	12	...	...	5	Girdling and thinning pines.
Deogarh „ ...	Murach ...	...	83	...	83	...	27	27	
	Kotikanásar ...	54	...	...	54	...	...	73	
Deoban „ ...	Bodyár ...	12	4	...	10	...	3	18	
	Kopti ...	8	...	...	8	...	...	12	
	Marauwa ...	12	...	...	12	...	...	18	
	Missau ...	...	100	...	100	...	97	97	
	Karamba ...	...	50	...	50	...	20	20	Girdling oaks.
	Konain ...	...	40	...	40	...	14	14	
	Total ...	2,560	291	...	2,851	...	296	1,119	

DEHRA DUN,
The 20th June 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle, N.-W. P. and Oudh.

FOREST DEPARTMENT, SCHOOL

OUTTURN (IN CUBIC FEET, SOLID) OF TIMBER AND FUEL

Division.	Timber in the rough; logs.					Timber in the rough; poles.				
	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees,	Right-holders.	Total.
Dehra Dún.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
(a) Regeneration.—									I.—Reserved	
Selection fellings	942	...	...	...	942	231	...	...	...	231
Coppice "	73	6	...	...	79	1,125	...	...	...	1,125
(b) Amelioration—										
Improvement fellings ...	25	61,620	...	...	61,645	30	68,338	...	...	68,368
(c) Miscellaneous—										
Unclassed fellings	...	154	...	...	154	...	8	...	...	8
Clearances	...	6,003	...	...	6,003	...	6,003	...	...	6,003
Drift wood	2,156	673	...	...	2,829	1,313	358	...	...	1,671
Dead fallen wood	...	21	...	...	21	..	...	...	...	...
Total ...	3,196	68,477	...	..	71,673	2,699	74,707	...	...	77,406
Sahárunpur.										
(a) Regeneration.—										
Selection fellings	178	1,153	...	...	1,331	...	...	...	...	...
Coppice "	...	...	...	...	...	89	...	...	...	89
(b) Amelioration.—										
Thinnings	...	...	...	...	...	1,094	3,174	277	...	4,545
(c) Miscellaneous.—										
Clearances	...	...	...	...	...	...	...	...	...	...
Unclassed fellings	...	128	...	...	128	347	...	...	...	347
Dead fallen wood	...	...	...	...	...	...	..	...	...	...
Total ...	178	1,281	...	...	1,459	1,530	3,174	277	..	4,981
Jaunsár.										
(a) Regeneration.—										
Selection fellings	...	308,537	50,735	...	359,272	...	705	437	...	1,142
Clean "	...	...	...	...	...	...	...	...	...	...
Coppice "	...	...	...	...	...	...	...	...	...	...
(b) Amelioration.—										
Thinnings	...	...	...	...	...	230	...	...	...	230
(c) Miscellaneous.—										
Unclassed fellings	...	...	...	...	...	...	...	...	...	...
Total ...	...	308,537	50,735	...	359,272	230	705	437	...	1,372
								II.—Protected		
								Nil.		
								III.—Unclassed		
(a) Regeneration.—									*Nil.*	
Selection fellings	1,120	309,690	50,735	...	361,545	231	705	437	...	1,373
Clean "	...	...	...	...	...	...	...	...	...	...
Coppice "	73	6	...	...	79	1,214	...	...	...	1,214
(b) Amelioration—										
Improvement fellings ...	25	61,620	...	...	61,645	30	68,338	...	...	68,368
Thinnings	...	...	...	...	...	1,324	3,174	277	...	4,775
(c) Miscellaneous.—										
Unclassed fellings	...	282	...	...	282	347	8	...	...	355
Clearances	...	6,003	...	...	6,003	...	6,003	...	...	6,003
Drift wood	2,156	673	...	...	2,829	1,313	358	...	...	1,671
Dead fallen wood	...	21	...	...	21	...	...	...	...	...
Total ...	3,374	378,295	50,735	...	432,404	4,459	78,586	714	...	83,759

DEHRA DÚN,
The 20th June 1891.

[Form No. 54.

CIRCLE, N.-W. PROVINCES AND OUDH.

DURING THE YEAR 1890-91 AND AGENCY OF EXPLOITATION.

Sawn or squared timber.					Miscellaneous.					Fuel					Total.
Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Outturn.
C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft	C. ft.	C. ft.
Forests.															
30	...	...	...	30	960	...	...	...	960	333	...	...	...	333	2,496
...	...	...	...	...	...	40	...	...	40	9,664	21,251	...	...	30,915	32,159
...	13,344	...	...	13,344	69	61,681	...	...	61,750	78,755	26,057	...	...	104,812	309,919
...	177	...	...	177	...	1,072	...	...	1,072	...	...	...	...	...	1,411
...	...	...	...	...	...	6,002	...	...	6,002	...	79,880	...	...	79,880	97,888
23	358	...	...	381	2	358	...	...	360	24,632	63,337	...	...	87,969	93,210
...	...	...	...	...	...	...	...	...	...	919	201,530	239,604	...	442,053	442,074
53	13,879	..	..	13,932	1,031	69,153	...	...	70,184	114,303	392,055	239,604	...	745,962	979,157
...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	1,331
...	...	...	...	...	...	...	...	...	...	60,765	30,400	...	...	91,165	91,254
...	...	...	...	...	...	470	38	...	508	2,000	208,972	...	...	210,972	216,025
...	...	...	...	...	...	...	...	...	...	...	10,000	...	...	10,000	10,000
...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	475
...	...	...	...	...	...	...	...	...	...	...	...	201,157	...	201,157	201,157
...	...	...		...	...	470	38	..	508	62,769	249,372	201,157	...	513,294	520,242
264,199	13	3,655	...	267,867	...	431	...	..	431	53,941	...	...	...	53,941	682,653
...	33,536	...	...	33,536	...	...	...	...	...	348	5 186	973,733	..	979,267	1,012,803
...	...	...	...	...	...	...	...	...	...	3,380	...	...	..	3,380	3,380
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	230
...	...	...	...	...	1,667	...	...	...	1,667	18,258	...	...	...	18,258	19,925
264,199	33,549	3,655	...	301,403	1,667	431	...		2,098	75,927	5,186	973,733	.	1,054,846	1,718,991
Forests.															
Forests.															
ABSTRACT.															
264,229	13	3,655	...	267,897	960	431	...	...	1,391	54,274	...	...	...	54,274	686,480
...	33,536	...	...	33,536	...	...	...	...	...	348	5,186	973,733	..	979,267	1,012,803
...	...	...	...	...	...	40	...	...	40	73,809	51,651	..	...	125,460	126,793
...	13,344	...	...	13,344	69	61,681	...	...	61,750	78,755	26,057	...	...	104,812	309,919
...	...	...	...	...	...	470	38	...	508	2,000	208,972	...	...	210,972	216,255
...	177	...	...	177	1,667	1,072	...	...	2,739	18,258	...	...	..	18,258	21,811
...	...	...	...	...	...	6,002	...	...	6,002	...	80,880	...	...	80,880	107,888
23	358	...	...	381	2	358	...	...	360	24,632	63,337	..	...	87,969	93,210
...	...	...	...	...	...	...	...	...	...	919	201,530	440,761	...	643,210	643,231
264,252	47,428	3,655	...	315,335	2,698	70,054	38	...	72,790	252,995	646,613	1,414,494	...	2,314,102	3,218,390

J. S. GAMBLE,

Conservator of Forests, School Circle, N.-W. P. and Oudh.

[Form No. 55.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH.

OUTTURN OF MINOR FOREST PRODUCE DURING THE YEAR 1890-91.

Division.	Description of produce.	Produce removed or utilized: By Government agency. Quantity.	By Government agency. Value	By purchasers. Quantity.	By purchasers. Value.	By free grants. Quantity.	By free grants. Value	By right-holders. Quantity.	By right-holders. Value.	Total. Quantity	Total. Value.	Remarks.
	1.—Reserved Forests.		Rs		Rs.		Rs.		Rs		Rs.	
Dehra Dún.	Bamboos, No.	260	2	713,550	5,040	...	...	...	...	713,810	5,042	
	Grazing Rs ...	...	...	..	7,607	...	(a) 773	...	...	...	8,380	(a) Amounts of half rates not realized from privileged villages.
	Fodder grass (headloads, &c) ,	...	...	2,010	246	...	...	...	...	2,010	246	
	Total ...	...	...	...	7,853	...	773	...	...	...	8,626	
	Leases of limestone Rs. ...	...	...	...	1,833	...	...	...	...	...	1,833	
	" hides " ..	...	...	...	343	...	...	...	...	...	343	
	" boulders " ..	...	...	...	15	...	...	...	...	...	15	
	" minor produce Rs	...	...	...	5,463	...	...	...	...	...	5,463	
	Passes of ditto Rs. ..	...	...	...	802	...	...	...	...	...	802	
	Total " ...	...	...	...	8,456	...	...	...	...	...	8,456	
	Total, Dehra Dún Division...	...	2	...	21,319	...	773	...	...	...	22,124	
Saháranpur.	Bamboos, No	...	...	6,620	53	...	...	...	...	6,620	53	
	Ditto, leased No. ...	...	...	848,000	5,337	...	...	...	...	848,000	5,337	
	Total ...	...	...	854,620	5,390	...	...	...	...	854,620	5,390	
	Grazing Rs. ..	...	...	...	16,436	...	(b) 572	...	...	...	17,008	(b) Amounts of half rates not realized from privileged villages.
	Fodder grass Rs. ...	...	...	...	19	...	...	...	...	...	19	
	Total ...	...	...	...	16,454*	...	572	...	...	...	17,027	
	Hides and horns Rs. ...	...	...	...	200	...	...	...	...	...	200	* Not including Rs. 108 for last year's dues recovered, and subsequently refunded during current year.
	Honey and wax... " ...	...	...	...	200	...	...	...	...	...	200	
	Stones ... " ..	...	...	...	121	...	...	...	...	...	121	
	Other minor produce " ...	...	...	...	1,755	...	...	...	...	...	1,755	
	Leases of ditto " ...	...	...	...	7,530	...	...	...	...	...	7,530	
	Total ...	...	...	...	9,806	...	...	...	...	...	9,806	
	Total, Saháranpur Division...	...	...	...	31,651	...	572	...	...	..	32,223	
Jaunsar.	Bamboos, No.	...	...	800	10	900	11	...	...	1,700	21	
	Ringals "	...	...	155,900	98	600	...	...	...	155,800	98	
	Total ...	...	...	156,000	108	1,500	11	...	...	157,500	119	
	Grazing ... Rs. ...	...	...	...	2,536	...	4,320	...	...	...	6,856	
	Fodder grass (bundles) ...	210	1	10,400	7	...	...	...	...	10,610	8	
	Ditto. (loads) ...	306	12	...	...	...	2,000	...	...	...	2,012	
	Total ...	...	13	...	2,543	...	6,320	...	...	...	8,876	
	Resin, maunds ...	425	1,911	...	...	...	...	...	...	425	1,911	
	Rosin " ...	162	891	...	...	...	...	...	...	162	891	
	Turpentine " ..	37	591	...	...	...	...	...	...	37	591	
	Chir and kail tar Mds. ..	90	360	...	...	...	...	...	...	90	360	
	Lime, cubic feet ..	250	94	...	...	...	...	...	...	250	94	
	Other minor produce, Rs. ..	...	...	...	301	...	500	...	.	...	801	
	Total ..	...	3,847	...	301	...	500	...	...	..	4,648	
	Total, Jaunsar Division ..	...	3,860	...	2,952	...	6 831	...	...	...	13,643	
	II.—Protected Forests *Nil.*											
	III. Unclassed State Forests. *Nil*											
	Abstract for Reserved Forests.											
The Circle.	Bamboos, No. . .	260	2	1,724,170	10,538	1,500	11	...	...	1,725,930	10,551	
	Grazing dues and fodder grass, Rs	...	13	...	26,851	...	7,665	...	...	...	34,529	
	Minor produce .. Rs. ..	...	3,847	...	18,563	...	500	...	...	...	22,910	
	Total ...	...	3,862	...	55,952	...	8,176	...	...	...	67,990	

COMPARATIVE ABSTRACT OF YIELD IN PRODUCE, 1890-91.

Description of produce.	1880-90. Quantity.	1880-90. Value.	1890-91. Quantity.	1890-91. Value.	Increase.	Decrease.
		Rs		Rs.	Rs.	Rs.
Timber ... ... C. ft	802,015	345,572	820,529	385,400	39,828	...
Poles and saplings ... ... " "	47,457		83,759			
Firewood and charcoal ... " " "	2,797,506	108,488	2,814,102	98,529	...	9,959
Bamboos .. " ... ... (scores)	130,884	16,708	86,207	10,551	...	6,157
Minor produce ... ... Rs.	...	21,023	...	22,910	1,887	...
Grazing dues and fodder grass ... ... "	...	24,520	...	26,864	2,344	...
Amount of free grazing ... ... "	...	7,886	...	7,665	...	171
Total ...		524,147	...	551,919	44,059	16,287
			Net increase	...	27,772	

DEHRA DUN,
The 20th June 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle, N.-W. P. and Oudh.

[Form No 56

FOREST DEPARTMENT, SCHOOL CIRCLE, N W PROVINCES AND OUDH

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPÔTS OR SOLD LOCALLY DURING THE YEAR 1890-91

	Particulars	No or quantity	Cubic feet	Total of each head: No or quantity	Total of each head: Cubic feet
	Balance in hand on 1st April 1891				
Debra Dún	Sál ballas, tors, and drift logs, karis, &c	2,800	4,865	2,809	4,865
	Firewood ..		*88,043		*88,043
Saharanpur	Sál poles and saplings	1,240	1,637	1,240	1,637
Jaunsár	Metre gauge deodár sleepers	69,861	112,684		
	Broad gauge deodar sleepers, deodar kail, oak tun, &c, timber	24,697	31,518	94,558	144,202
	Firewood and charcoal ..		54,973		54,973
	Fodder grass, loads and bundles	5,033		5,033	.
	Resin Mds	103		103	..
	Rosin ... "	3	..	3	
	Turpentine ... "	24	..	24	
Total balance	Timber . .	.		98,607	150,704
	Firewood and charcoal	...			143,016
	Fodder grass, loads and bundles	.		5,033	.
	Resin Mds	.		103	
	Rosin "		.	3	..
	Turpentine "			24	
	Received from the Forests in depôts				
	Sál, sissu, tún logs, sál tors poles and saplings and kokat poles and pieces	1,763	2,337		
	Metre gauge deodar sleepers	130,234	202,427		
	Broad gauge deodár sleepers fir, deodar, kail, sal, tun oak, &c, timber . .	27,059	37,160	159,056	241,924
	Firewood and charcoal ..	..	168,362		168,362

Particulars	No or quantity	Cubic feet	Total of each head: No or quantity	Total of each head: Cubic feet
Removed by purchasers from depôts				
Sal ballas, tors, poles, and saplings .	4,939	7,446	...	.
Broad gauge deodár sleepers and rai deodar, kail, oak, tún, &c, timber	16,683	19,265	.	
Metre gauge deodar sleepers	76,981	127,310	98,603	154,021
Firewood and charcoal		278,752		278,752
Fodder grass, loads and bundles	355	.	355	
Resin ... Mds	58	...	58	
Rosin "	119	...	119	
Turpentine "	15		15	
Sold locally				
Metre gauge deodar sleepers .	5	7		
Deodar and chír scantlings	16,056	24,835		
Sal, sissu and kokat poles,	1,880	699	17,941	25,541
Firewood ..	...	68,557	...	68,557
Fodder grass loads and bundles . .	306		306	
Drift timber sold locally				
Sal logs, karis, &c	453	2,648		
Deodar, chír, &c, logs, karis	474	1,623	927	4,271
Firewood		66,057	..	66,057
Lost or written off.				
Metre gauge deodar sleepers	716	1,077		
Deodar and chír, &c, timber	1,288	2,958	2,006	4,035
Firewood .	...	1,067	...	1,067
Pula grass, loads, &c. ...	4,778	.	4,778	
Converted in depôts				
Chír and deodár, &c, timber .	62	175	62	175
Used by Department				
Sál, sissu logs, poles, &c	800	1,009		
Metre gauge deodar sleepers	148	202		
Deodar, chír, rai, &c, timber	5,081	3,087	6,029	4,298

* Equivalent to 132,065 cft stacked

[Form No. 56.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPÔTS OR SOLD LOCALLY DURING THE YEAR 1890-91—*(concluded)*.

Particulars.	Number or quantity.	Cubic feet.	Total of each head	
			Number or quantity	Cubic feet.
Fodder grass, loads and bundles,	100	...	100	...
Resin ... Mds.	425	...	425	...
Rosin ... „	162	...	162	...
Turpentine ... „	37	...	37	...
Chír and kail tar ... „	90	...	90	..
Lime ... „	...	250	...	250
DEPARTMENTAL COLLECTION OF DRIFT TIMBER FROM THE GANGES AND JUMNA.				
Sál, sissu logs, &c. ...	525	3,730	...	...
Deodár, chír, &c., logs, karis, &c,	504	1,667	1,029	5,397
Firewood	...	51,980	...	51,980
Bamboos	260	...	260	...
RECEIVED FROM THE FOREST AND SOLD LOCALLY				
Metre gauge deodár sleepers ...	5	7	...	...
Deodár and chír scantlings ...	16,050	24,835	...	...
Sál, sissu and kokat poles, &c. ...	1,880	699	17,941	25,541
Firewood and charcoal ...	...	68,557	...	68,557
Fodder grass, loads and bundles,	306	...	306	...
Grand Total: Timber ...	...	...	276,633	423,566
Grand Total: Firewood and charcoal	...	...	...	431,915
Grand Total: Bamboos ...	...	...	260	...
Grand Total: Fodder grass, loads and bundles ...	...	...	5,439	...
Grand Total: Resin Mds	...	...	528	...
Grand Total: Rosin „	...	...	165	...
Grand Total: Turpentine „	...	...	61	...
Grand Total: Chír and kail tar „	...	...	90	...
Grand Total: Lime ...	...	...	...	250

Particulars.	Number or quantity	Cubic feet.	Total of each head.	
			Number or quantity.	Cubic feet
Firewood ...	...	1,540	...	1,540
Bamboos ...	260	...	260	...
Chír and kail tar Mds	72	...	72	...
Lime ...	.	227	...	227
TRANSFERRED TO FOREST SCHOOL				
Metre gauge deodár sleepers ...	30	53		
Deodár, &c., timber ...	32	74	62	27
BY DISTILLATION.				
Rosin Mds.	261	...	261	
BALANCE AT CLOSE OF THE YEAR				
Dehra Dún Division				
Sál, sissu logs and pieces...	145	1,466	145	1,466
JAUNSÁR DIVISION				
Metre gauge deodár sleepers ...	122,218	186,469		
Broad gauge deodár sleepers and rai, kail, deodár, oak, tún, &c, timber ...	28,620	43,163	150,838	229,632
Firewood and charcoal ...	...	15,042	...	15,042
Resin Mds.	209		209	...
Rosin „	46	...	46	...
Turpentine „	46	...	46	..
Chír and kail tar .	18	..	18	..
Lime ...	...	23	..	23
Total balance: Timber ...	..	...	150,983	231,098
Total balance: Firewood and charcoal,	...	...	...	15,042
Total balance: Resin Mds	mds ..	...	209	...
Total balance: Rosin „	..	...	46	...
Total balance: Turpentine „	...	...	46	..
Total balance: Chír and kail tar „	...	...	18	...
Total balance: Lime ...	...	..	...	23
Grand Total: Timber ...	...	...	276,633	423,566
Grand Total: Firewood	...	...	...	431,915
Grand Total: Bamboos ...	...	...	260	...
Grand Total: Fodder grass, loads, &c.	...	...	5,439	.
Grand Total: Resin ... Mds.	...	...	528	...
Grand Total: Rosin „	...	...	165	...
Grand Total: Turpentine „	...	...	61	...
Grand Total: Chír and kail tar „	...	...	90	...
Grand Total: Lime ...	...	...	...	250

[Form No. 56.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPÔTS, OR SOLD LOCALLY, DURING THE YEAR 1890-91—*(concluded)*.

Particulars.	Number or quantity.	Cubic feet.	Total of each head		Particulars.	Number or quantity.	Cubic feet.	Total of each head.	
			Number or quantity	Cubic feet.				Number or quantity.	Cubic feet.
ABSTRACT.									
TIMBER INCLUDING DRIFT.									
Balance in hand at commencement of the year ..	...	150,704			Removed by purchasers from depôts ...	...	154,021		
Received from the forests during the year ..	...	241,924			Sold locally ...	...	25,541		
Received from the departmental collection of drift timber from the Ganges and Jumna .	...	5,397			Ditto (drift wood) ...	...	4,271		
Received from the forests and sold locally ...	...	25,541	...	423,566	Lost or written off ...	...	4,035		
					Converted to other classes,	...	175		
					Used by department ...	...	4,298		
					Transferred to other divisions ...	...	127		
					Balance at close of the year ...	...	231,098	...	423,566
FIREWOOD.									
Balance at commencement of the year ..	...	143,016			Removed from depôts by purchasers... ...	...	278,752		
Received from the forests during the year ...	...	168,362			Sold locally ..	...	68,557		
Collection of drift wood from the Ganges, &c. ..	...	51,980			Drift wood	...	60,057		
Received from the forests and sold locally ...	...	68,557	...	431,915	Lost or written off ...	...	1,067		
					Used by department ...	...	1,540		
					Balance at close of the year	...	15,912	...	431,915
BAMBOOS.									
Collected from the Gauges ..	...	...	260	...	Used by department ...	...	...	260	
MISCELLANEOUS PRODUCE.									
Fodder grass (loads and bundles).									
Balance at commencement of the year	5,033				Removed by purchasers from depôts ..	355			
Received from the forests during the year	100				Sold locally	306			
Received from the forests and sold locally ...	306	...	5,439		Lost or written off ...	4,778	...	5,439	
ROSIN.									
Balance at commencement of the year Mds	103				Removed by purchasers from depôts ...	58			
Received from the forests during the year Mds	425	...	528		By distillation Mds	261			
					Balance at close of the year ... Mds.	209	...	528	
RESIN.									
Balance at commencement of the year .	Mds. 3				Removed by purchasers from depôts Mds	119			
Received by distillation ...	„ 162	...	165		Balance at close of the year ... Mds	46	...	165	
TURPENTINE.									
Balance at commencement of the year Mds.	24				Removed by purchasers from depôts Mds.	15			
Received by distillation Mds	37	...	61		Balance at close of the year ... Mds.	46	...	61	
CHÍR AND KAIL TAR.									
Received from the forests in depôts Mds.	90	...	90		Used by department. Mds.	72			
					Balance at close of the year ... Mds	„ 18	...	90	
LIME.									
Received from the forests in depôts ...	...	250	...	250	Used by department ..	...	227		
					Balance at close of the year	...	23		250

DEHRA DÚN,
The 20th June 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle, N.-W. P. and Oudh.

[Form No. 57A.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH.

ABSTRACT SHOWING THE VALUE OF TIMBER AND OTHER PRODUCE AT SALE DEPÔTS FOR THE YEAR 1890-91.

Description of timber and other produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in value.		Remarks.
	No.	Cubic feet.	Value.	No.	Cubic feet.	Value.	In favor of the year.	Against the year	
Dehra Dún Division.			Rs.			Rs.	Rs.	Rs.	
Sál ballis, tors and kokat ballis, &c. ...	2,736	4,481	1,751	...	...	...	...	1,751	
Drift logs, pieces and scantlings ...	73	384	87	145	1,466	450	363	...	
Firewood	...	*88,043	5,811	...	...	...	...	58,11	* Equivalent to 1,32065 cft feet stacked.
Total ...	...	...	7,649	...	...	450	363	7,562	
Sahdranpur Division.									
Sál timber, poles and saplings	1,240	1,637	614	...	...	...	...	614	
Total ...	...	...	614	...	...	...	...	614	
Jaunsar Division.									
Broad gauge deodár sleepers	50	155	75	5	20	10	...	65	
Metre ditto	69,861	112,684	78,593	122,218	186,460	1,37,405	58,902	...	
Deodár, fir, kail tún, fancy wood, and miscellaneous timber, *including drift* ...	24,647	31,363	19,159	28,615	43,143	18,995	...	164	
Firewood and charcoal	...	50,596	9,851	...	14,788	2,806	...	7,045	
Ditto (loads)	2,068½	4,137	776	...	1,154	108	...	668	
Fodder grass, loads and bundles ...	5,033	...	10	...	...	...	...	10	
Pine resin ... ... Mds. ..	103	...	412	200	...	939	527	...	
Rosin ... ... " ...	3	...	13	46	...	253	240	...	
Turpentine ... ... " ...	24	...	377	46	...	736	359	...	
Chír and kail tar	...	...	...	18	...	54	54	...	
Lime	...	...	...	...	23	8	8	...	
Total ...	...	...	1,09,266	...	..	1,61,404	60,090	7,952	
GRAND TOTAL ...	...	...	1,17,529	...	...	1,61,854	60,453	16,128	

Net difference in favour of the year, Rs. 44,325.

DEHRA DÚN,
20*th June* 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle, N.-W. P. & Oudh.

[Form No. 57B.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH.

ABSTRACT SHOWING THE VALUE OF LIVE AND DEAD STOCK FOR THE YEAR 1890-91.

Description of live and dead stock.	On hand at the commencement of the year.		On hand at the close of the year.		Difference in value.	
	Number.	Value.	Number.	Value.	In favor of the year.	Against the year.
		Rs.		Rs.	Rs.	Rs.
Direction Division.						
Office furniture	53	733	57	750	17	...
Tents	6	418	7	600	182	...
Buildings and building materials	13	38,064	2	2,300	...	35,764
Miscellaneous	26	235	27	235	...	...
Elephant	1	2,800	1	2,700	...	100
Total ...	...	42,250	...	6,585	199	35,864
Dehra Dun Division.						
Surveying and other instruments	67	217	72	411	194	...
Tools	1,697	916	1,709	938	22	...
Office furniture	430	888	394	945	57	...
Tents	14	137	14	172	35	...
Buildings and building materials	107	21,551	101	19,630	...	1,921
Miscellaneous	500	786	499	852	66	...
Elephant	1	1,700	1	1,600	...	100
Total ...	...	26,195	...	24,548	374	2,021
Saharanpur Division.						
Surveying and other instruments	15	79	16	115	36	...
Machinery	13	42	12	41	...	1
Tools	825	371	825	371	...	...
Office furniture	187	1,258	200	1,334	76	...
Tents	7	481	7	487	6	...
Buildings and building materials	42	10,311	54	11,282	971	...
Miscellaneous	550	1,470	425	1,409	...	61
Elephant	1	1,200	1	2,300	1,100	...
Total ...	...	15,212	...	17,339	2,189	62
Jaunsar Division.						
Surveying and other instruments	54	430	55	563	133	...
Machinery	17	152	9	149	...	3
Tools	2,603	3,062	2,287	2,504	...	558
Office furniture	63	506	68	505	...	1
Tents	9	262	9	262	...	...
Buildings and building materials	417	43,823	412	45,293	1,470	...
Miscellaneous	13,336	1,180	3,240	808	...	372
Total ...	...	49,415	...	50,084	1,603	934
GRAND TOTAL ...	...	1,33,072	...	98,556	4,365	38,881

Net difference against the year, Rs. 34,516.

DEHRA DÚN,
The 20th June 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle, N.-W. P. and Oudh.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH.

ABSTRACT OF STOCK ACCOUNT 1890-91.

Description of material, &c.	On hand at commencement of the year.										On hand at close of the year.			
	Dehra Dún.		Saharánpur.		Jaunsár.		Direction.		Total.		Dehra Dún.		Saháranpur.	
	Cubic feet.	Value.	Cubic feet.	Value.	Cubic feet.	Value.	Cubic feet.	Value	Cubic feet.	Value	Cubic feet.	Value.	Cubic feet.	Value.
		Rs.		Rs.		Rs.		Rs		Rs.		Rs		Rs.
Timber ...	4,865	1,838	1,637	614	144,202	97,827	...	...	150,704	1,00,279	1,466	450	...	...
Firewood and charcoal	* 88,048	5,811	...	...	54,973	10,627	...	...	143,016	16,438	...	...	...	...
Minor produce ...	...	...	...	...	...	812	...	...	...	812	...	...	...	...
Total ...	92,908	7,649	1,637	614	199,175	109,266	...	...	293,720	117,529	1,466	450	...	...
Live stock ...	...	1,700	...	1,200	...	...	...	2,800	...	5,700	...	1,600	...	2,300
Dead stock, including buildings, furniture &c. ...	...	24,495	...	14,012	...	49,415	...	39,450	...	1,27,372	...	22,948	...	15,039
Total ...	...	26,195	...	15,212	...	49,415	...	42,250	...	1,33,072	..	24,548	...	17,339
GRAND TOTAL ...	...	33,844	...	15,826	...	1,58,681	...	42,250	...	2,50,601	...	24,998	...	17,339

Description of material, &c.	On hand at close of the year.						Increase or decrease in value on 31st March 1891.				
	Jaunsár.		Direction.		Total.		Dehra Dún.	Saháranpur.	Jaunsár.	Direction.	Total.
	Cubic feet.	Value	Cubic feet.	Value	Cubic feet.	Value.					
		Rs.		Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Timber	220,032	1,56,500	...	...	231,098	1,56,950	−1,388	−614	+58,673	...	+56,671
Firewood and charcoal ...	15,942	2,914	...	...	15,942	2,914	−5,811	...	−7,713	...	−13,524
Minor produce	...	1,990	...	...	...	1,990	...	...	+1,178	...	+1,178
Total ...	245,574	1,61,404	...	...	247,040	1,61,854	−7,199	−614	+52,138	...	+44,325
Live stock	...	...	...	2,700	...	6,600	−100	+1,100	...	−100	+900
Dead stock, including buildings, furniture, &c. ...	...	50,084	...	3,885	...	91,956	−1,547	+1,027	+669	−35,505	−35,416
Total ...	...	50,084	...	6,585	...	98,556	−1,047	+2,127	+669	−35,605	−34,516
GRAND TOTAL ...	...	2,11,488	...	6,585	...	2,60,410	−8,846	−1,513	+52,807	−35,665	+9,809

* Equivalent to 132,065 cubic feet stacked.

DEHRA DÚN,
The 20th June 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle, N.-W. P. and Oudh.

[Form No. 58.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH.

SUMMARY OF REVENUE OF THE DIFFERENT DIVISIONS DURING 1890-91.

Budget Heads.	Direction.	Debra Dún Division.	Saháranpur Division.	Jaunsár Division.	Total.
RECEIPTS.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
I.—Timber and other produce removed from the Forests by Government agency—					
a. Timber	...	1,442 13 7	640 2 0	1,39,285 7 8	1,41,377 [illegible] 7 3
b. Firewood and charcoal	...	6,394 10 1	854 1 6	27,765 0 0	35,013 12 4
c. Bamboos	...	...	...	88 1 0	88 1 0
d. Sandal-wood	...	...	...	...	...
e. Grass and other minor produce ...	...	...	...	1,284 1 11	1,284 1 11
II.—Timber and other produce removed from the Forests by consumers or purchasers—					
a. Timber	...	56,388 6 10	1,325 7 5	33,906 14 3	91,620 12 6
b. Firewood and charcoal	...	3,797 15 0	3,920 3 6	410 13 6	8,129 0 0
c. Bamboos	...	5,040 2 3	5,389 12 0	107 10 0	10,537 8 3
d. Grazing and fodder grass	...	6,322 11 7	9,813 14 10	2,542 10 9	18,679 5 2
e. Other minor produce	...	8,331 3 0	9,795 15 3	301 0 0	18,428 2 3
III.—Drift and waif wood and confiscated forest produce	...	5,503 7 10	1 0 0	1,536 3 9	7,040 11 7
IV.—Revenue from Forests not managed by Government—					
a. Duty on foreign timber and other forest produce	...	...	...	12,239 12 5	12,239 12 5
b. Revenue from shared and private forests ...	...	...	...	...	...
V.—Miscellaneous—					
a. Fines and forfeitures	...	1 0 0	9 1 0	13 0 0	23 1 0
b. Refunds	50 0 0	72 2 3	139 3 0	16 0 0	277 5 3
c. Other sources	189 12 4	263 4 9	717 5 3	2,018 14 9	3,789 5 1
Total, Receipts ...	239 12 4	93,557 13 2	32,615 1 9	2,22,115 10 9	3,48,528 6 0
A.—CONSERVANCY AND WORKS.					
I.—Timber and other produce removed from the Forests by Government agency—					
a. Timber	...	278 7 3	67 5 0	83,181 14 1	83,527 10 4
b. Firewood and charcoal	...	4,191 1 2	455 0 0	10,915 4 5	15,561 5 7
c. Bamboos	...	...	...	...	...
d. Sandal-wood	...	...	...	...	...
e. Grass and other minor produce ...	...	...	...	2,400 15 10	2,400 15 10
II.—Timber and other produce removed from the Forests by consumers or purchasers	...	1,268 7 2	177 10 6	...	1,446 1 8
III.—Drift and waif wood and confiscated forest produce	...	2,303 9 0	0 4 0	699 1 2	3,002 14 2
IV.—Revenue from Forests not managed by Government—					
a. Duty on foreign timber and other forest produce	...	...	...	1,383 11 10	1,383 11 10
b. Revenue from shared and private forests ...	...	...	...	...	...
V.—Rent of leased Forests and payments to shareholders in Forests managed by Government	...	...	...	11,150 0 0	11,150 0 0
VI.—Live Stock, Stores, Tools and Plant—					
a. Purchase of cattle	...	...	2,132 2 6	...	2,332 2 6
b. Feed and keep of cattle	503 7 2	579 14 3	764 2 2	.	1,937 7 7
c. Purchase of stores, tools and plant ...	254 2 9	612 3 10	380 10 5	232 4 0	1,479 5 0

[Form No. 58.

FOREST DEPARTMENT, SCHOOL CIRCLE, N.-W. PROVINCES AND OUDH

SUMMARY OF EXPENDITURE OF THE DIFFERENT DIVISIONS DURING 1890-91.

Budget Heads.	Direction.	Dehra Dún Division.	Saháranpur Division.	Jaunsár Division.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
VII.—COMMUNICATION AND BUILDINGS—					
a. Roads and bridges	...	2,223 13 5	587 4 9	3,840 6 2	6,651 8 4
b. Buildings	1 15 7	2,631 9 1	2,148 14 9	4,135 [illegible] 1	8,818 5 6
c. Other works	15 4 6	111 9 1	223 10 7	287 [illegible] 1	638 0 11
VIII.—DEMARCATION, IMPROVEMENT AND EXTENSION OF FORESTS—					
a. Demarcation	...	1,379 7 8	823 13 9	1,035 3 0	3,238 8 5
b. Compensation for land and rights ...	...	...	...	1,056 15 6	1,056 15 6
c. Surveys and working plans	...	...	...	188 12 0	188 12 0
d. Sowing and planting	...	74 4 1	117 12 0	1,111 2 4	1,303 2 5
e. Protection from fire	...	2,402 15 5	1,879 8 3	1,526 0 4	5,809 1 0
f. Other works	...	3,126 2 2	404 12 0	1,269 11 7	4,800 9 9
IX.—MISCELLANEOUS—					
a. Refunds	...	125 0 0	108 2 3	12,933 7 4	13,166 9 7
b. Law charges	..	0 7 9	...	...	0 7 9
c. Other charges	712 14 6	678 14 2	527 13 2	889 7 4	2,809 [illegible] 2
TOTAL A.—CONSERVANCY AND WORKS ...	1,577 12 6	21,087 13 6	10,898 14 1	1,38,298 4 9	1,72,762 12 10
B.—ESTABLISHMENT.					
I.—SALARIES—					
a. Conservators	20,674 15 0	...	...	...	20,674 15 9
b. Superior officers	...	9,306 6 6	7,316 2 0	11,841 10 8	28,524 3 2
c. Subordinate forest and depôt establishments,	..	8,060 4 6	6,812 5 2	7,751 14 4	23,524 8 0
d. Office establishments	3,358 13 4	2,187 13 3	1,418 15 8	2,060 5 4	9,025 15 7
e. Deputation and special allowances ...	...	...	104 4 1	...	104 4 1
II.—TRAVELLING ALLOWANCES—					
a. Conservators	1,178 8 6	...	...	...	1,178 8 6
b. Superior officers	..	1,210 8 0	964 14 0	1,433 10 0	3,609 0 0
c. Subordinate forest and depôt establishments,	...	858 5 6	503 3 10	1,000 8 3	2,362 1 7
d. Office establishments	80 3 9	96 2 0	79 13 4	20 3 11	276 7 0
III.—CONTINGENCIES—					
a. Stationery	...	63 9 9	62 11 0	19 13 0	146 [illegible]
b. Carriage of tents and records	225 0 5	335 4 11	289 5 3	374 6 6	1,224 1 [illegible]
c. Rents, rates and taxes	363 9 6	360 0 0	14 7 0	39 4 0	777 [illegible] 6
d. Pay of police guards	...	...	...	...	...
e. Official postage	138 14 0	118 12 0	83 0 6	112 15 6	448 10 0
f. Sundries	599 10 10	318 7 10	324 11 10	730 14 10	1,973 13 4
TOTAL B.—ESTABLISHMENTS ...	26,619 12 1	23,870 10 3	17,973 13 8	25,385 10 4	93,849 14 4
GRAND TOTAL OF EXPENDITURE ...	28,167 8 7	45,858 7 9	28,872 11 9	1,63,683 15 1	2,66,612 11 2

CALCUTTA,
The 23rd June 1891.

I. C. BOSE,
Assistant Comptroller-General, Forests.

[Form No 59

FOREST DEPARTMENT, SCHOOL CIRCLE N W PROVINCES AND OUDH

Dr

ACCOUNT CURRENT FOR THE YEAR 1890-91

Cr.

	Rs a p	Rs a p		Rs a p	Rs a p
To Cash Balance			By Expenditure as per Annual Summary, Form No 58 .		2,66,612 11 2
„ VIII —Assessed Taxes—					
Income Tax—Deductions from salaries .	..	1 500 8 9	„ Deposits		2 504 0 0
„ Revenue as per Annual Summary, Form No 58		3 48 528 6. 0	„ Forest Cash Remittances—Local—		
„ Service Funds—					
Civil Fund—Ordinary Bengal		..	Remittances to Treasuries	1 74 671 8 3	
„ Additional do,					
Military Fund—Bengal .		...	Inter Divisional Transfers	1 112 0 5	
„ „ Madras	.				1,77 783 8 8
„ Orphan Fund—Bengal		.	„ Advances Recoverable .		1,45 716 14 6
Uncovenanted Service Family Pension Fund—Bengal			„ Suspense		
General Family Pension Fund	.		„ Account Current (other Governments)—		
Hindu Family Annuity Fund	.				
„ Deposits		2,278 0 0	Remittances to the Government of India	4,212 2 2	
„ Forest Cash Remittances—Local—					
Forest cheques drawn ...	2,54,007 6 0		Remittances to the Government of Panjab	12,298 12 10	
Inter Divisional Transfers	3 596 0 10		Remittances to the Government of Bengal	857 5 0	
		2 57 603 7 4			
„ Advances Recoverable		1,46,422 12 7			17,368 4 0
„ Suspense ..			„ Inter Departmental Transfers—		
„ Account Current (other Governments)—					
Remittances from Government of India to North Western Provinces and Oudh	10,108 1 9	10,108 1 9	Public Works Department—State Railway	1,15,181 4 0	
			Public Works Department—Ordinary Branches	25 054 10 0	
„ Inter Departmental Transfers—				1,40 235 14 0	
Public Works Department—Ordinary Branches .	9 276 4 9		Military Department—Bengal,	25,586 7 11	
Military Department	..				
			Civil Department ..		
Civil Department—					
Jail ..			Miscellaneous	139 14 0	
Mathematical Instrument Department	395 7 0				1,65 962 3 11
Miscellaneous .	15 0 0		„ Cash Balance		180 5 5
		9 686 11 3			
	410 7 0				
Total ..		7,76,127 15 8	Total ..		7,76,127 15 8

Calcutta,

The 23rd June 1891

I. C BOSE,

Assistant Comptroller-General, Forests.

[Form No. 60.

FOREST DEPARTMENT, SCHOOL CIRCLE N-W PROVINCES AND OUDH.

REVENUE RECEIVED AND OUTSTANDINGS ON ACCOUNT OF REVENUE DURING 1890-91.

Division	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total	Amount realised during year	Balance due to the Department at end of year	Remarks
		Rs a p	Rs a p	Rs a p	Rs a. p	Rs a p	
Direction	Sale proceeds of timber and other forest produce	.	239 12 4	239 12 4	239 12 4		
Dehra Dún	Ditto ditto ..	13,603 5 0	1,04,308 12 5	1,17,912 1 5	93,557 13 2	21,354 4 3	
Saháranpur	Ditto ditto	465 8 4	39,468 5 8	39,933 14 0	32,615 1 9	7,318 12 3	
Jaunsar	Ditto ditto	17,953 0 5	2 29,759 7 5	2,47,712 7 10	*2,22,124 10 9	25,587 13 1	* Includes Rs 9 written off
	Total ..	32,021 13 9	3,73,776 5 10	4,05,798 3 7	3,48,537 6 0	57,260 13 7	

DEHRA DÚN,
The 20th June 1891.

J. S. GAMBLE,
Conservator of Forests, School Circle, N-W P and Oudh.

[Form No. 61.

FOREST DEPARTMENT, SCHOOL CIRCLE, N W. PROVINCES AND OUDH

OUTSTANDINGS AND LIABILITIES ON ACCOUNT OF CONTRACTORS AND DISBURSERS FOR 1890-91.

Division	Department debtor.			Department creditor			Balance due.	
	At commencement of year	Recoveries in cash and value of supplies and work done during the year	At close of year	At commencement of year	Payments made during year	At close of year	To Department (outstandings)	By Department (liabilities).
	Rs a p	Rs a. p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p
Direction	6 8 0	3,899 15 2	3,906 7 2	171 4 10	3,807 14 6	3,970 3 4	79 4 2	6 8 0
Dehra Dún .	1 5 3	30,610 10 3	30,611 15 6	2,242 10 5	29,807 12 1	32,050 6 6	1,438 7 0	.
Saháranpur ...	...	7,302 8 0	7,302 8 0	501 7 2	7,128 10 1	7,825 1 3	522 9 3	..
Jaunsár ..	..	1,04,609 11 2	1,04,609 11 2	21,684 6 1	1,04,777 9 10	1,26,461 15 11	21,852 4 9	..
Total ...	7 13 3	1,46,422 12 7	1,46,430 9 10	24,599 12 6	1,45,716 14 6	1,70,316 11 0	23,892 9 2	6 8 0

CALCUTTA,
The 23rd June 1891.

I. C. BOSE,
Asst Comptroller-General, Forests

[Form No. 62.

FOREST DEPARTMENT, SCHOOL CIRCLE, N W PROVINCES AND OUDH

FINANCIAL RESULTS OF THE YEAR 1890-91.

Division.	Timber and other produce removed from the forests by Government Agency		Other revenue.		Formation, protection and improvement of forests	Total	
	Receipts	Charges	Receipts	Charges	Charges	Receipts	Charges
	Rs	Rs	Rs.	Rs	Rs	Rs	Rs
Dehra Dún .. .	11,208	10,903	82,422	16,986	26,428	93 630	54,317
Saharanpur .	1,504	3,423	31,185	11,094	17,176	32,689	31,693
Jaunsar ...	1,69,959	1,38,958	52,300	12,840	27,805	2,22,259	1,80,608
Total ..	1,82,671	1,54,284	1,05,857	40,920	71,409	3,48,528	2,66,613

DEHRA DÚN,
The 20th June 1891

J S. GAMBLE,
Conservator of Forests, School Circle, N.-W. P and Oudh.

ORDERS OF GOVERNMENT.

No. $\frac{782F.}{293A-20}$ OF 1891.

RESOLUTION.

REVENUE (FORESTS) DEPARTMENT.

Dated Allahabad, the 24th October 1891.

READ—

Annual Progress Reports of the Administration of the Forest Department, North-Western Provinces and Oudh, for the year ending 31st March 1891.

OBSERVATIONS.—The volume containing the reports of the three Circles was not received from the Government Press till the 10th of September.

The reports of the School and Central Circles are dated the 20th and 30th of June respectively. But the appendices on fire protection were only completed on the 3rd of August and the 20th July. The lateness of the monsoon occasioned this delay as it always will do in years when the rains are late, and the practice of including the results of fire conservancy up to the setting in of the rains extends the period of report in this department of forest work by three to four months yearly. The proposal that the Forest year should be one ending on the 30th of June will simplify matters and avoid much apparent unpunctuality. The report of the Oudh Circle is dated the 1st August; the Conservator explains that it was delayed owing to the non-receipt till a very late date of the Divisional Officers' reports. The Lieutenant-Governor trusts that the Conservator will ensure that the review of the Forest Administration of the whole Province is not again delayed for this reason.

2. The Central Circle remained throughout the year in charge of Mr. S. Eardley-Wilmot, Officiating Conservator. Captain Wood held charge of the Oudh Circle, but was succeeded on his retirement on the 1st May by Mr. Shakespear, who has written the annual report. Mr. Bagshaw, who held charge of the School Circle till the 13th of October, was succeeded by Mr. J. S. Gamble.

Area of reserved forests in square miles.

Circles.	1st April 1890.	31st March 1891.
Central	1,585	1,598
Oudh	1,203	1,204
School	802	800

3. *Areas.*—The area of the reserved forests in square miles at the beginning and the close of the year are compared in the margin.

In the Central Circle the area was increased by the reservation of the Landsowne forests, 24 square miles, and of 11 miles of grass lands in the Jhánsi Division, which, though under the control of the Forest Department, had not been formally reserved. In the Garhwál Division four square miles were disafforested, being exchanged for an equal area of district forests now under settlement. Re-calculation of areas and an inter-divisional change of boundaries accounts for the

other changes in this Circle. The extension of the control of the Department to some of the more valuable of the district forests in Kumaun is under the consideration of Government.

The changes in the area of the reserved forests in the Oudh Circle were unimportant; 524 acres were alienated for the Lucknow-Pilibhít and the Bengal and North-Western Railways. On the other hand some valuable exchanges were effected with a view to the consolidation of the forests, the simplification of complicated boundaries, and the exclusion from the forests of cultivated land.

The area of the forests of the School Circle underwent little change during the year.

4. Besides the reserved forests there are in the Naini Tal and Lalitpur Divisions 94 square miles of protected forests, 26 square miles having been added during the year by the transfer of the Airadeo forests from the district authorities to the Forest Department. The area of the unclassed forests in the Bánda District remained unchanged.

In the School Circle there are also 14 square miles of unclassed State forests.

5. *Boundaries.*—In the Central Circle the boundaries are said to be in good order. The expenditure was heavy, and amounted to Rs. 4,414 against Rs. 2,250 spent on them in the previous year. The increase is due to the demarcation of the new reserve at Lansdowne, where 1,522 pillars were erected at a cost of Rs. 2,220. The remaining Rs. 2,194 were mainly spent on repairs and improvements to existing demarcation.

In the Oudh Circle the boundaries are also reported to be in good order and the work of the year was practically limited to the repair of existing boundary lines, which was carried out at a cost of Rs. 932 against an expenditure of Rs. 2,523 in the previous year. It appears that in not a few instances the correctness of the forest boundaries has been questioned during the year. The Conservator should endeavour to have these disputes adjusted at a very early date, as any doubt on the question is certain to encourage the raising of fresh claims. The neutral strip along the Nepál boundary was cleared on the British side, but the Nepál Darbár again failed to clear their side of the strip and the matter has been again reported to the Government of India.

In the School Circle the demarcation of the forests is still very incomplete and should continue to have the Conservator's attention. In Jaunsár of a boundary of 448 miles only 90 miles have been demarcated. The preparation of the boundary records for the Dehra Dún Division should be pressed to completion. A large number of pillars appear to have been in need of repair at the close of the year. The expenditure of the Circle amounted to Rs. 3,238. The Panjáb Government were addressed in December last on the subject of the disputes with the Rána of Taroche, and until a reply to that reference is received no final decision can be arrived at. The total expenditure on demarcation and the maintenance of the boundary lines in the three Circles amounted to Rs. 8,584 as against Rs. 6,106 in the previous year.

6. *Surveys, working plans, &c.*—The expenditure under this head in each Circle compared with that of the preceding year was as follows :—

Circles.			1889-90.	1890-91.
Central	..	...	4,954	1,453
Oudh	...	...	621	209
School	...	...	3,272	189
	Total		8,847	1,851

The expenditure in the Central Circle on surveys and working plans was Rs. 1,453. In paragraph 8 of the report it is said this sum was paid for work carried out in Jhánsi, Bánda and Naini Tal. But according to Form No. 58 there was no expenditure at all under this head in the first two of these three divisions, and the actual expenses were mainly confined to the Naini Tal and Kumaun Divisions. In the former the new reserves had to be surveyed; in the latter some account should have been given of the object of the surveys. These were departmental undertakings; the survey of the Lansdowne reserve, also in this Circle, was done by the Survey of India. In the Oudh and School Circles the surveys during the forest year were insignificant. The working plan for the Kohtri-Palain forests was the only plan sanctioned during the year in the Central Circle. An officer was specially deputed to collect data for the preparation of working plans in Kumaun, but ill-health prevented his completing the work allotted to him. Sufficient information has however been collected to admit of the preparation of plans for the sál and khair areas of Kumaun. It is hoped that these will be completed during the present year. Much still remains to be done in the preparation of working plans in this important Circle, but the establishment of Forest Officers is for the present below its normal strength, and it is to be feared that little can be done this winter to advance their completion. In the Oudh Circle the Gorakhpur plan has been completed and has been sent to the Inspector-General of Forests for opinion, but has not yet been received by Government. The Kheri working plan, which has been for years under preparation, has again been returned to the Conservator for revision in the light of the remarks of the Inspector-General of Forests. The proposals of the plan have in the main been accepted by Government; it remains to throw these proposals into a form technically correct. In the School Circle no new plans were taken in hand, but a supplement to explain and define the operations of the Dehra Dún plan was under preparation.

7. Since the close of the year the Assistant Inspector-General of Forests has brought to the notice of Government that very serious deviations from the sanctioned working plans have been made without report or the approval of Government. Further inquiry from the Conservators has shown that these deviations have not seldom been made without even their knowledge. If Divisional Officers are allowed to ignore the scheme of operations laid down in these working plans, the plans are worthless. Conservators are therefore requested to make

it their special duty to see that in future the provisions of the plans are strictly adhered to until the approval of Government is given to any variations which the officer in charge may consider to be expedient.. The whole object of the plans is to inform the Government fully of the character of its property and to substitute for the caprices of changing officers a well considered and well ordered programme of work. Changes in the markets, inaccuracies of forecast, and other causes will often induce alteration of these programmes, but it must be distinctly understood that the plans are binding upon both Deputy Conservators and Conservators till any proposed variations have been sanctioned by Government. The plans already approved by Government have been prepared with a care which has been often of superfluous minuteness, but this affords the greater reason for their being scrupulously respected until the object and reason of any projected change has been fully explained and agreed to; and Conservators will hold themselves responsible that these orders are obeyed.

8. *Establishment.*—In the Central Circle there are only two trained Rangers and seven trained Foresters. There has been great difficulty in obtaining suitable men. The experience of paid probationers has been most unfortunate; they have either failed to qualify or have resigned before completing the course or shortly after joining the Circle. In the Oudh Circle four Rangers and two Foresters are well reported on, but the subordinate establishment seems inefficient, and not a few of the staff have been punished or criminally prosecuted for dishonesty. In the School Circle the Range officers are generally satisfactory, but in the Dún the protective staff is said to have shown slackness. Throughout these Provinces complaint is made of the difficulty of obtaining properly qualified candidates, and of the impossibility of keeping the existing establishment, insufficient as it is, up to its sanctioned strength. It is hoped that these difficulties will disappear when the proposals now before the Government of India for improving the pay and prospects of the executive and protective staffs are sanctioned. The number of private students who pass from the Forest School is insufficient to meet the demand, and the very unsatisfactory system of paid probationers has still to be relied upon.

9. *Breaches of Forest Law.*—The following table gives the principal details :—

Prosecutions for breaches of Forest Law.

Circle.	Cases before the Court.	Prosecutions.				Cases compounded.	
		Convictions.		Acquittals.		Number of persons	Amount received in compensation.
		Cases.	Persons.	Cases.	Persons		
							Rs.
Central	61	48	109	6	14	896	2 201
Oudh	95	85	137	10	23	246	915
School	18	15	26	3	3	257	..
Total ...	174	148	272	19	40	1,399	3,116
Total for 1889-90 ...	111	95	169	11	36	1,318	4,253

There is a considerable increase in the number of cases brought before the Courts, which is spread over all three Circles. In the Central Circle, where the number of cases before the Court rose from 32 to 61, the increase was entirely in the Bánda Division, where the number of cases was 39 as compared with 4 only in the previous year. The increase is large and is probably due to an increased vigilance on the part of the executive staff, which is justified by the large number of convictions obtained. In the Oudh Circle the large number of offences was mainly due to illicit grazing in Bahraich and to offences connected with the drift operations in the Bahramghát Division. In Bahraich also 2,815 head of cattle were impounded against 1,201 of the previous year. In the School Circle the number of cases before the Courts was not large, but in Saháranpur three cases of incendiarism were successfully prosecuted, and in Jaunsár two men were convicted of destroying a boundary pillar.

No special cause can be definitely assigned for an increase in the number of forest offences during the year, but it appears that the increase in the number of cases disposed of is evidence not of any increase in the number of offences against the forest law, but rather of increased watchfulness on the part of the subordinate staff.

10. *Forest fires.*—The following statement compares the fire conservancy operations of the year with those of 1890:—

Forest fires.

Circle.		Area attempted to be protected.	Area actually protected	Failures	Percentage of failure	Cost during the year	Cost per acre.
		Acres.	Acres.	Acres		Rs.	Pies.
Central	1889-90	514,197	482,779	31,418	6 11	18,797	7 01
	1890-91 ..	559,068	544,897	14,171	2 53	21,376	7 34
Oudh ...	1889-90 ..	495,341	466,513	28,828	5 82	13,082	5 07
	1890-91 .	495,101	466,750	28,351	5 72	12,808	4 96
School ..	1889-90	400,265	381,246	19,019	4 98	6,218	3 20
	1890-91 ..	403,250	402,875	375	·09	5,057	2·09
Total ..	1889-90 .	1,409,803	1,330,538	79 265	5 63	38,097	5 19
	1890-91 ..	1,457,419	1,414,522	42,897	2 94	39,241	5 17

NOTE —Revision of area calculations in Jhánsi has necessitated alterations in the figures for 1889-90 to admit of comparison with the figures for 1890-91.

In addition to the area given in the table above protection was also attempted over 72,538 acres of open forests in the Oudh Circle. Of this latter however apparently 31,183 acres were burnt. The Conservator should have given some account of the measures taken in these open forests to protect them. It is understood that by these measures the rights of the villagers were in nowise curtailed, but this should be separately explained to the satisfaction of the Government. The season generally was a favourable one for fire conservancy, owing

to the wet winter and spring; and although the area over which protection was attempted increased by nearly 50,000 acres, the failures extended over only 42,897 acres as compared with 79,265 in the previous year In the Central Circle the delay in the breaking of the rains necessitated the prolongation of operations for three weeks beyond the usual date with a slight rise in the cost per acre. Nevertheless for the Province the cost per acre was reduced to the low figure of 5·17 pies per acre. The cost per acre in the School Circle of the fire conservancy operations averaged only 2 09 pies per acre, omitting Rs. 360 given as a reward to establishments in the Saháranpur Division. The figures given in Appendix I apparently include this amount, though it is not so stated. In many cases the figures given in the body of the report differ from the figures of the prescribed forms. These differences are generally capable of explanation, as in the case of the cost of fire protection in the School Circle referred to above; but the necessary explanation should in all cases be given by Conservators: the omission to do so makes it often a matter of difficulty to reconcile the apparent discrepancies.

In the School Circle there were only eight fires extending over 375 acres, and the only fire of any magnitude was one burning over 343 acres in the Siwaliks. None of the fires are said to be due to incendiarism. In the Central Circle two fires over 3,054 acres are attributed to incendiaries, and 11 fires, burning 5,856 acres, entered the forests by crossing exterior fire lines. Some of these, it would appear, might have been avoided had the fire lines been more efficiently cleared. In the Oudh Circle the operations were less successful, no less than 28,351 acres being burnt over, and a large number of fires are ascribed to malicious firing. The Commissioners of Lucknow and Gorakhpur will be asked to consider, with the Conservator, reasons for these serious attacks on this very valuable State property and the best means of checking them. The action taken by the Magistrate of Saháranpur a few years ago appears to have effectually stopped incendiary fires in the Siwaliks. The cost per acre in the Kheri Division, averaging 13 pies, was very high, but it is satisfactory that in the large forests of that division and in Bahraich there should have been no fires at all. The Collector of Pilibhít will be referred to as to the circumstances under which in the Nadha case the Forest Department subordinates had to attend Court six times.

No account is given of the working of the rules promulgated by Government Order No. $\frac{349F.}{825-65}$, dated 2nd of May last, for regulating the lighting of fires in the proximity of closed forests: though the Conservator of the School Circle states that his divisional officers note the good effect of these orders. Next year Conservators should specially report on the working of the rules, as to whether any difficulty has been experienced in enforcing them, the extent to which the object aimed at has been obtained, and whether or not they have been the cause of friction between the Departmental subordinates and the owners of land adjoining the forests.

11. *Grazing.*—The receipts on account of grazing dues and sale of fodder grass in each Circle are compared with the figures of the previous year in the following statement :—

		Central.	*Oudh.*	*School.*	*Total.*
1889-90	...	Rs. 23,571	45,371	27,782	96,724
1890-91	...	Rs. 35,611	50,305	18,679	1,04,595

In the Central Circle of the receipts of the year Rs. 5,000 are deferred dues of 1889-90.

In the School Circle there was a large outstanding balance, amounting to Rs. 8,315, in the Saháranpur and Dehra Dún Divisions. In the latter division it is said to be due to the introduction of the new rules, and in the former to delay in counting the cattle, as the Collector was of opinion that a fresh enumeration was unnecessary.

The total number of cattle grazed is estimated at 186,957 in the Central Circle, 333,119 in the Oudh Circle, and 142,685 in the School Circle. The percentage of the area closed to grazing to the total area was 52·14 in the Central Circle, 45·18 in the Oudh Circle, and 29 06 in the School Circle. This allows an acreage per head of cattle grazed of 2 in the Central Circle, 2·45 in the School Circle, and of 1·27 only in the Oudh Circle. In the Gonda and Gorakhpur Divisions of this Circle there appears to be over-grazing, as there is only 0·95 and 0 63 acres of grazing land available per head of cattle. Excessive grazing is also reported from the Saháranpur forests. In the Ganges Division the percentage of closed forests has been reduced from 90·85 to 60 59. The Conservator does not explain under what circumstances he was able to open to grazing 75 square miles previously closed.

The grazing rules are said not to be working well in Dehra Dún, and in Saháranpur it has been questioned whether in their present form they can be legally enforced. The question of their revision has now been remitted to the District Officers for report to Government. In Oudh they have also been misunderstood, but amendment will depend on the decision which may be come to in the case of the Saháranpur and Dehra Dún rules.

12. *Fencing.*—In the Naini Tal Division of the Central Circle Rs. 1,983 were expended on erecting a single strand of barbed wire to protect from cattle trespass 2,568 acres closed to grazing. A similar experiment was tried in the Bhira forests, and though the wire successfully kept out village cattle, it was knocked about by wild animals.

13. *Natural Re-production.*—In the Oudh Circle the year's results are thus summarized : " Natural re-production by seed is everywhere good on areas exempted from fire and over-grazing, or that have been closed for even a few years : coppice too seems generally very vigorous." In the burnt and grazed over portions, however, there is said to be no re-production, and the condition is described as hopeless. Oak did fairly well in the Central Circle, but chír and sál seed was wanting; sál seeded well in the plains forests of the School Circle, and the deodár and kharshu oak in the Jaunsár hills. The severe cold and frosts of the winter in the School and Central Circles did a great deal of damage

to the young growth, especially in the grass plains of the latter, and emphasized the lesson that the greatest caution must be taken in removing the over head cover.

The experiment mentioned in paragraph 13 of last year's review, of firing chír forests in the early part of the season in order to facilitate the control of fires in these highly inflammable forests, is pronounced a failure by the Central Conservator, because of the harm caused to young growth; he is of opinion also that fires later in the season, when the needles have fallen, would not be prevented The results in the School Circle are not mentioned. As the experiment is one of particular interest, Government would like the Conservator to record his opinion on the results in the Chandnigadh block, and the conditions, if any, on which it should be continued.

14. *Artificial Re-production.*—The expenditure on artificial re-production during the past two years is compared in the margin. Of the charges in the Central Circle, Rs. 1,672 were expended on the Chaubattia gardens, of which the receipts again fell to Rs. 693 in consequence of the failure of the fruit crop. The sweet chesnut was sown in large quantities: it thrives well in the hills, and it is thought will re-pay cultivation. The nursery distributed a very large number of fruit and other trees to villagers in Kumaun. The deodár plantations on China are prospering and were extended. In the School Circle the expenditure was mainly confined as usual to the Jaunsár Division. The Conservator recommends that in the case of deodár desultory sowings should be discontinued, and is right in introducing a regular system of permanent nurseries, planting out the trees at not less than three years old. He admits, however, that in all favourable localities great success has been obtained in the re-stocking of blanks. The measurements of the growth of sál in the Central Circle show that the growth of the year was considerably below the average, a consequence apparently of profuse seeding during the year.

	1889-90	1890 91
	Rs	Rs
Central Circle	2,520	2 719
Oudh Circle ..	3,746	2,803
School Circle ...	1,692	1,303
Total	7,958	6 825

The tannage obtained by Messrs. Cooper, Allen and Co. from the bark of sál and asaina of the Oudh Circle was of inferior quality. Dhao leaves and bark have also been supplied to them for experiments in tanning.

15. *Climber Cutting.*—The Lieutenant-Governor is glad to see that this very necessary duty in Indian forests has not been neglected. The areas in which creepers were systematically cut during the past season were 29 square miles in the Central Circle, 20 square miles in the Oudh Circle, 16 in the School Circle. Colonel Campbell's suggestion that creepers should be cut before instead of after fellings appears thoroughly practical as it lessens the labour of felling and the risk of injury to surrounding trees; and, to judge from paragraph 53 of the School Circle report, has long guided actual practice in that part of the

provincial forests. In the School Circle a good deal of useful work was done in girdling and thinning, and the Conservator has satisfied himself that it was done in a generally judicious manner.

16. *Communications and Buildings.*—The outlay on communications and buildings during the year is given in the statement below :—

Circles.	Roads and bridges.	Buildings.	Other works.	Total.	Percentage on gross expenditure of the year.
	Rs.	Rs.	Rs.	Rs.	
Central	29,678	14,095	1,144	44,912	17·99
Oudh	11,271	13,932	1,600	26,803	6 66
School	6,652	8,818	638	16,108	6·04
Total ...	47,596	36,845	3,382	87,823	9 56
Total, 1889 90 ..	56,153	39,390	2,548	98,091	10 1

The expenditure under this head has been reduced in all Circles. In the Central Circle the percentage of this expenditure on the gross expenditure of the year has been reduced from 20·17 to 17·99. Twenty-five miles of new cart-roads were made at a cost of Rs. 3,609, and 90 miles of new paths at a cost of Rs. 3,911. Rs. 22,153 were spent on the repairs of 1,776 miles of existing roads. The cost of repairs must always be high in this Circle, owing to the hilly nature of the country. In the Oudh Circle 37 miles of new roads and paths were made at a cost of Rs. 1,007, bringing the total length of the roads and paths of the Circle to 1,359. The expenditure on roads includes Rs. 3,766 on account of the bridge-of-boats at Srinagar over the Sarda, which brought in an income of Rs. 3,999, and a net profit of Rs. 233. In the School Circle Rs. 1,277 were spent on new roads, and Rs. 5,374 on the repairs of existing roads. The communications in the Sahárnpur and Dehra Dun Divisions are said to be still insufficient. There are now in this Circle 24 permanent inspection-houses. The Lieutenant-Governor observes that the Conservator is now satisfied these are ample for all present requirements, and that no more are required. In the Oudh Circle the expenditure was less than the allotment by Rs. 6,673. Sickness and want of supervising agency are assigned as the reasons for the works proposed not having been carried out.

17. The extension of communications in the forests and the careful maintenance of all existing roads is essential to the development of the timber and fuel trade; and it is also necessary that there should be proper shelter for the officers and men of the forest staff. At the same time the expenditure on buildings should be jealously guarded by the Conservators. In most of the working plans which have been before the Lieutenant-Governor the number and character of the buildings needed in the several forests for the proper

accommodation of the officials has been carefully specified, but in the blocks which are not yet covered by formal plans, he trusts to the Conservators giving very special examination to the necessities of the case before they sanction expenditure on this head. The returns do not show what provision has already been given in each Circle, and the Lieutenant-Governor would be glad to have in the next reports a statement in the form given by Mr. Gamble in paragraph 46 of his report of the number of rest houses, foresters' quarters, and offices for each division.

18. *Outturn and Working.*—The following abstract shows the timber, fuel and minor produce removed from the forests during the year and the agency by which it was removed:—

Total outturn of the Forests.

	In cubic feet (000's omitted).							
	Class.				*By whom removed.*			
	Total outturn.	Regeneration fellings.	Amelioration fellings.	Unclassed fellings	Government agency.	Purchasers	Free grantees.	Right-holders.
Central Circle.								
Timber ...	9,61,	4,89,	1,79,	2,93,	36,	7,15,	48,	1,62,
Firewood ...	17,51,	3,52,	66,	13,33,	1,58,	14,72,	...	1,21,
Minor produce	Rs. 2,02,389,	...	...	...	Rs. 30,66,	Rs. 1,97,472	Rs. 498	Rs. 1,353
Oudh Circle.								
Timber ...	23,30,	1,71,	6,05,	15,54,	7,50,	4,85,	9,66,	1,29,
Firewood ...	23,82,	23,	14,36,	9,23,	14,52,	5,61,	3,17,	52,
Minor produce,	Rs. 1,44,603.	...	...	...	Rs. 15,673	Rs. 1,12,161	Rs. 13,052	Rs. 3,717
School Circle.								
Timber ...	9,04,	6,67,	2,10,	27,	2,75,	5,74,	55,	...
Firewood ...	23,14,	11,59,	3,16,	8,39,	2,53,	6,47,	14,14,	...
Minor produce,	Rs. 67,990	...	...	...	Rs. 38,62,	Rs. 55,952	Rs. 3,176	...
Gross Total.								
Timber ...	41,95,	13,27,	9,94,	18,74,	10,61,	17,74	10,69,	2,91,
Firewood ...	64,47.	15,34,	18,18,	30,95,	18,63,	26,80,	17,31,	1,73,
Minor produce,	Rs 4,14,982	...	...	...	Rs. 22,601	Rs. 3,65,585	Rs. 21,726	Rs 5,070

Timber to the amount of 41,95,000 cubic feet, fuel to the amount of 64,47,000, and minor produce to the value of Rs. 4,14,982 were removed from the forests during the year. The corresponding figures for the previous year were:—Timber 42,91,000 cubic feet, fuel 64,11,000 cubic feet, and minor produce Rs. 3,86,971. There was, thus, some decrease in the output of timber, and some increase in the sale of fuel and minor produce. These figures include rough estimates of the produce taken away by free grantees and right-holders. Omitting these uncertain figures, the produce removed by Government agency and by purchasers during the last two years is compared in the following table:—

		Government agency.			Total.	*Purchasers.*			Total.
		Central Circle	Oudh Circle.	School Circle		Central Circle.	Oudh Circle.	School Circle	
		Cubic feet (000's omitted)							
Timber ...	1889-90 ...	16,	5,28,	2,91,	8,35,	7,82,	6,81,	4,45,	18,58,
	1890-91 ...	36,	7,50,	2,75,	10,61,	7,15,	4,85,	5,74,	17,74,
Firewood...	1889-90 ...	1,74,	10,53,	5,61,	17,88,	13,10,	4,60,	5,34,	23,04,
	1890-91 ...	1,38,	14,52,	2,53,	18,63,	14,72,	5,61,	6,47,	26,80,

Compared with the figures of the previous year there was an increase both in the timber and fuel exported by Government agency or by purchasers. Owing to the extension of the improvement fellings there was a large increase in the export of green timber from the Central Circle. The amount of timber exported by purchasers was however less than the exceptional amount sold in the previous year, the excess being taken by right-holders and free grantees, for which a large grant of building timber to the Lansdowne Cantonment is in part responsible. The remarks of the Conservator in paragraph 61 of his report on the supply of fuel to Naini Tal will be brought to the notice of the Municipality. In this Circle the exploitation of bamboo areas has received careful consideration. The demand is increasing, notwithstanding a slight increase in the price, and with a view to securing a permanent and regular supply in the future a system of a two years' rotation was introduced in the Garhwál Division, which Mr. Wilmot mentions has already produced a marked improvement in the appearance and reproductive vigour of the bamboo growth, and which has now been extended to the Ganges Division. In the Lalitpur Division the old system, under which the bamboos were removed by Departmental agency and sold locally, was worked at a loss. It has been abandoned and a new system introduced, which the Conservator expects will not only offer more advantageous terms to direct purchases, but also provide for the supply of more distant markets. In the School Circle there was on the whole a considerable increase in the cubic outturn of timber, but no explanation is given of the marked change in the proportion removed by private purchasers as compared with Government agency. In the Sahíranpur Division of the School Circle there has been a serious falling off in the bamboo sales, not because of any decrease in the demand, but owing to the deterioration of the stock. It is evident that the bamboo clumps need to be more systematically worked. In the Oudh Circle the produce was, as usual, mainly removed by Departmental agency, the increase of the year being due, in a large measure, to the demand for timber by the Rájputána and Bengal and North-Western Railways. There was also a large increase in the demand for fuel, and the general result was the largest output of produce that has ever been attained as yet, even in this very active circle. The completion of the Bareilly-Sitapur Railway, and the probabilities of an extension northwards of the Sháhjáhanpur steam tramway promise to give fresh markets and an important accession of trade to the forests of this Circle. The drift operations in Báhramghát were successful and yielded Rs 11,691 against Rs. 4,992 in the previous year. The demand for "baib" grass for the manufacture of paper is steadily increasing, and in the Jaunsár Division it is anticipated that the resin tapping industry will become one of great importance. The information given by the School Conservator in regard to the resin produce of his forests will be communicated to the Chief Engineer. The good service done by Ranger Birbal in developing this new source of income has the acknowledgments of the Government.

19. The value of the timber and fuel in stock in the Departmental depôts at the beginning and the end of the year is shown in the following table:—

Depôt stocks of timber and firewood.

Circle.		At beginning.		At end.	
		Quantity.	Value.	Quantity.	Value.
			Rs.		Rs.
Central ...	Timber ...	C. ft. 5,924	395	C ft. 1,809	552
	Firewood ..	Mds. 2,262	1,254	Mds. 3,428	3,945
Oudh ...	Timber ...	C. ft. 850,032	4,55,581	C. ft 1,096,483	765,824
	Firewood ...	Mds 143,095	27,066	Mds. 364,649	22,102
School ...	Timber ...	C. ft. 150,704	1,00,279	C. ft. 231,098	156,950
	Firewood ...	Mds. 187,038	16,488	Mds. 15,942	2,914

In the Central Circle the quantity of timber in the depôts fell further from 5,924 cubic feet to 1,809 cubic feet, but a very much higher value was placed on it of which no explanation is given. There was a large stock of bamboos on hand, three times that of last year, which is singular in view of the assurance that the demand is increasing; and the Conservator will doubtless lose no time in reducing the stock. In the Oudh Circle the increase in the stock in hand chiefly consisted of logs and sleepers from the Kheri and Gonda forests. The figures in the statement above, as far as they concern the Oudh Circle, are the figures in paragraph 43 of the report as corrected by Conservator, and do not therefore correspond with those in Form 57, which he has omitted to correct.

20. The produce of the forests and its estimated value are shown in the next statement:—

(000's omitted from cubic feet and rupees.)

		Central Circle.		Oudh Circle.		School Circle.	
		C. ft.	Rs.	C. ft.	Rs.	C. ft.	Rs.
Timber ..	1889-90..	9,69,	3,77,	24,73,	4,12,	8,49,	3,46,
	1890-91...	9,61,	3,59,	23,30,	4,77,	9,04,	3,85,
Firewood..	1889-90...	17,19,	55,	18,95,	68,	27,98,	1,08,
	1890-91..	17,51,	59,	28,82,	78,	23,14,	98,
Grazing and minor produce.	1889-90 ..	...	1,75,	...	1,43,	...	69,
	1890-91...	...	2,02,	...	1,44,	...	68,

The figures given in Appendix V for the Oudh Circle, which shows the main facts of the year's working, correspond neither with the figures in the body of the report nor with the figures in Forms 54 and 55, and does not appear to have been checked in Conservator's office; it is understood that the appendix is incorrect and a revised copy has been called for.

21. The financial results of the year's operations are shown in the appended tables :—

Receipts, Expenditure and Surplus.

Circles.	Receipts.					Expenditure					Surplus.				
	1886-87.	1887-88.	1888-89	1889-90.	1890-91.	1886-87.	1887-88.	1888-89.	1889-90	1890-91	1886-87.	1887-88	1888-89.	1889-90.	1890-91.
	Rs.	Rs.	Rs,	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Central	5,78,023	4,60,450	5,32,833	5,02,943	5,80,384	2,77,117	2,37,543	2,54,400	2,59,920	2,49,568	3,00,906	2,22,907	2,78,433	3,33,023	3,30,816
Oudh	6,58,674	4,29,870	5,39,654	6,86,556	7,08,967	3,75,130	3,14,429	3,16,870	4,32,127	4,02,716	2,83,544	1,15,441	2,22,778	2,56,429	3,06,251
School	3,36,854	3,57,064	3,90,318	4,22,660	3,48,528	2,67,543	2,77,591	2,67,470	2,71,104	2,66,613	69,516	79,472	1,22,845	1,51,556	81,915
Total	15,73,556	12,47,384	14,62,805	17,14,159	16,37,879	9,19,590	8,29,574	8,38,740	9,63,151	9,18,897	6,53,966	4,17,810	6,24,053	7,51,008	7,18,982

Receipts and Expenditure under the headings of Departmental Timber Operations, Other Revenue, and Formation, &c., of Forests.

Circles.		Departmental timber operations.			Other Revenue.			Formation, protection and improvements.	Net surplus.
		Receipts.	Charges.	Surplus	Receipts.	Charges	Surplus.		
		Rs.	Rs.	Rs	Rs.	Rs.	Rs.	Rs.	Rs.
Central ...	1889-90 ...	45,621	32,565	13,056	5,47,322	1,08,940	4,38,382	1,18,415	3,33,023
	1890-91 ...	42,584	31,320	11,264	5,37,800	1,05,085	4,32,715	1,13,168	3,30,816
Oudh ..	1889-90 ...	4,22,765	2,65,756	1,57,009	2,65,791	76,735	1,89,056	89,636	2,56,429
	1890-91 ..	4,32,805	2,34,255	1,98,550	2,76,162	96,412	1,79,750	72,049	3,06,251
School ...	1889-90 ...	2,52,330	1,48,327	1,04,003	1,80,330	33,968	1,46,362	88,809	1,61,556
	1890-91 ...	1,82,671	1,54,284	28,387	1,65,857	40,920	1,24,937	71,409	81,915
Total ...	1889-90 ...	7,20,716	4,46,648	2,74,068	9,93,443	2 19,643	7,73,800	2,96,860	7,51,008
	1890-91 ...	6,58,060	4,19,859	2,38,201	9,79,819	2,42,417	7,37,402	2,56,621	7,18,982

Details of Receipts under the principal budget heads.

Circles.	Timber and other produce removed from the forests by Government agency.		Timber and other produce removed from the forests by consumers and purchasers.		Confiscated drift and waif wood.		Forests not managed by Government.		Miscellaneous.		Total in 1890-91.
	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Central ...	45,621	42,584	5,34,053	5,32,607	1,293	1,564	...	15	11,976	3,614	5,80,384
Oudh ...	4,16,903	4,32,805	2,40,851	2,37,103	20,193	26,892	...	1,855	10,609	10,312	7,08,967
School ...	2,44,676	1,77,763	1,56,089	1,47,395	7,654	7,041	18,747	12,240	5,494	4,090	3,48,529
Total ...	7,07,200	6,53,152	9,30,993	9,17,105	29,140	35,497	18,747	14,110	26,079	18,016	16,37,880

Expenditure on Conservancy and Works.

Circles.		Timber and other produce removed by Government agency.	Timber and other produce removed by consumers and purchasers.	Confiscated drift and waif wood.	Rent on leased forests.	Live-stock, stores, tools and plant.	Communications and buildings.	Demarcation, improvement and extension of forests.	Miscellaneous.	Total.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Central...	1889-90...	23,312	25,121	...	503	9,582	52,425	33,767	1,497	1,46,207
	1890-91...	21,238	27,087	...	539	13,092	44,911	33,434	1,755	1,42,656
Oudh ...	1889-90..	2,41,249	12,040	7,096	...	5,479	27,093	30,465	2,042	3,25,464
	1890-91..	2,11,116	10,105	7,887	...	8,872	26,804	23,979	2,881	2,91,644
School ...	1889-90..	1,15,538	2,122	4,275	11,150	2,969	18,574	19,116	*8,738	1,82,482
	1890-91...	1,01,550	1,446	3,003	11,150	5,749	16,108	16,397	†17,360	1,72,763
Total ...	1889-90...	3,80,099	39,283	11,371	11,653	18,013	98,092	83,348	12,277	6,54,153
	1890-91...	3,33,904	38,638	10,890	11,689	28,313	87,823	73,810	21,996	6,07,063

* Includes Rs. 8,340, being expenditure on forests not managed by Government.

† Includes Rs. 1,334, being expenditure on forests not managed by Government.

Expenditure on Establishments.

Circles.	Salaries.		Travelling allowances.		Contingencies.		Total.	
	1889-90.	1890-91.	1889-90	1890-91.	1889-90.	1890-91.	1889-90.	1890-91.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Central	95,175	87,890	13,189	13,100	5,349	5,922	1,13,713	1,06,912
Oudh	87,743	91,160	13,594	14,136	5,327	5,779	1,06,664	1,11,075
School	75,728	81,854	7,895	7,426	4,999	4,570	88,622	93,850
Total ...	2,58,646	2,60,904	34,678	34,662	15,675	16,271	3,08,999	3,11,837

22. The financial results of the year are very satisfactory, and the surplus of Rs. 7,18,982, though less by Rs. 32,026 than the surplus of 1889-90, is far in excess of that of any previous year. The receipts amounted to Rs. 16,37,879 against an expenditure of Rs. 9,18,897, as compared with Rs. 17,14,159 and Rs. 9,63,151 in the previous year. The receipts decreased slightly in the Central Circle and considerably in the School Circle, but were the highest on record in the Oudh Circle.

23. The figures of each Circle may now be separately considered. In the Central Circle the receipts were Rs. 12,000 less than those of the previous year, mainly in consequence of Rs. 7,700 having been credited to the previous year's receipts for an elephant license. Sickness and bad weather are also said to have interfered with the short export season. There was, however, a decrease in expenditure mainly under the head "Communications and buildings" and lower paid officers were in administrative and controlling charge. The net surplus

was only Rs. 2,000 less than that of the preceding year, the highest on record. The highest gross revenue was still yielded by the Kumaun Division, but the highest net revenue was given by Garhwál, in which the comparatively inexpensive system of improvement fellings has been rapidly developed. The Lieutenant-Governor notices the commendation given to Mr. Osmaston for the activity and energy which resulted in giving his division (the Ganges Division) the highest receipts on record. The surplus in the Bundelkhand forests diminished, and Sir A. Colvin trusts that the issue of the amalgamation, which has recently been effected there, will be a marked improvement in the management. The Conservator mentions the excellent work done last winter by the late Mr. Oakeshott, C S., in forest settlements in the Kumaun hills, work which it was proposed that he should this winter continue. His work was marked by sympathy and thoroughness, and the Lieutenant-Governor, in common with his many friends, has heard with deep regret the news of his early death.

In the Oudh Circle the surplus is the highest on record, coupled with a decrease in expenditure as compared with the previous year; the increase in the receipts is due, as mentioned above, to the larger demand of the railways running near these forests both for fuel and sleepers. The Conservator reports that he has contracts with three railway companies for very large deliveries; and there is every prospect, since railway lines have been taken to the immediate neighbourhood of all the best forests of the Circle, of a great development of the fuel export. The supplies to the railways are alone considerable, and the Lieutenant-Governor is glad to see many indications in the Conservator's report of good feeling between the Forest Officers and the railway authorities, leading to mutual accommodations. The heavy work of the division was done in the Kheri, Bahraich and Gorakhpur Divisions. As Mr. Shakespear says, the year was one of progress; more produce was removed, better rates obtained, work more economically done, and Captain Wood ended the last year of his long administration of the Oudh forests by booking the highest surplus that has been obtained since the Circle was formed. His intimate knowledge of his forests, his activity in availing himself of every new opening for selling his timber, and his habits of business enabled him to give to the Oudh forests a remarkable development. From technical criticisms which have been recently before Government it would appear that, notwithstanding suggestions to the contrary, his energetic exports have been well within the capacity of the forests; and it is a pleasure to the Lieutenant-Governor to record the obligations of this Government to Captain Wood for his long and faithful services.

In the School Circle there was a very heavy falling off in the receipts: mainly owing to the Rájputána Railway having been allowed to take over 30,000 sleepers less than usual, and to outstandings on account of grazing in the Sahárapur Division. The expenditure was normal and calls for no remarks. The main commercial business of the Circle is in Jaunsár, which, as usual, gave three-fourths

of the total surplus, a result very creditable to the energy and arrangement of Mr. Moir. The Lieutenant-Governor is glad to see that the new rules for the management of the timber boom on the Jumna are not only appreciated by the timber merchants, but have improved the arrangements for the control of the rafts. He entirely agrees with the remarks of Mr. Gamble on the bad policy of keeping Forest Officers at their desks on accounts, when they should be in their forests directing and inspecting, and he shares the hope that the new Forest Code will largely reduce office business.

24. The Conservator of the School Circle more than once draws attention to the impossibility of real improvement, and the injury to the forests, caused by the systematic firing permitted in the Jaunsár hills, and urges that protection from fire should be introduced. If this can be done without undue interference with the rights of the neighbouring villages, the Conservator should submit proposals for the very gradual introduction of protective measures.

25. The Lieutenant-Governor has pleasure in again recording his sense of the active services given by the officers of the Department generally throughout the year. The work of the forests was carefully and judiciously done, and the reports are short and judiciously compiled. He is glad to notice the recognition by the Oudh Conservator of the help given by three of the District Officers in the Circle, and he trusts that every year the co-operation and good understanding between the Revenue and Forest Officers will increase. This will be the case if the Forest Officers on the one hand are careful to respect the expectations and privileges of their neighbours, and District Officers on the other aid and support the Forest Officers in the protection of the forests. The Lieutenant-Governor looks to the Commissioners of Divisions more particularly to cultivate these good relations. It must be remembered that this State property is becoming yearly more valuable as the new railways bring their timber within reach of a rapidly widening circle of customers, and it is the Commissioner's influence which will moderate departmental narrowness when necessary, and assure the labours of the staff that prompt and active help from the Magistracy which is their due.

By order, &c.,

J. WOODBURN,

Chief Secy. to Govt., N.-W. P. and Oudh.

No. $\frac{783F.}{293A-21}$.

ORDER.—Ordered, that a copy of the above Resolution (with copy of the Report) be forwarded to the Conservators of Forests, Central, Oudh and School Circles, for information and guidance.

No. $\frac{784F.}{293A-22}$.

Ordered, also, that a copy (with copy of Report) be forwarded to the Commissioners of the Meerut, Benares, Gorakhpur, Rohilkhand, Allahabad, Kumaun, Lucknow and Fyzabad Divisions, for information.

No. $\frac{785F.}{293A-23}$.

Ordered, also, that a copy (with copy of Report) be forwarded to the Comptroller-General, Forest Branch, Calcutta, for information.

No. $\frac{786F.}{293A-24}$.

Ordered, also, that a copy (with copy of Report) be forwarded to the Inspector-General of Forests to the Government of India, for information.

No. $\frac{787F.}{293A-25}$.

Ordered, also, that a copy (with copy of Report) be forwarded to the Chief Engineer, Public Works Department, North-Western Provinces and Oudh, for information, with reference to paragraph 18 of the review.

By order, &c.,

E. F. L. WINTER,

Under-Secy. to Govt., N.-W P. and Oudh.

No. 138 F., dated Calcutta, the 5th February 1892.

From—SIR E. C. BUCK, KT., *Secretary to the Government of India,*

To—*The Chief Secretary to the Government of the North-Western Provinces and Oudh, Revenue (Forests) Department.*

I AM directed to acknowledge the receipt of your letter No. 828—293 A., dated the 7th November last, forwarding the Annual Progress Reports of Forest Administration in the North-Western Provinces and Oudh for 1890-91, together with the Resolution thereon of His Honour the Lieutenant-Governor.

2. The changes effected during the year in the constitution of the State forest-property in the North-Western Provinces and Oudh have resulted in a net increase of 11 square miles of Reserves and 27 square miles of Protected Forests.

The returns show the following distribution among the three Circles:—

CIRCLES.	Reserved. Forests.	Protected Forests.	Unclassed Forests.	Total.	Proportion of Forests to whole area of Province (107,441 square miles).
	Sq. Miles.	Sq. Miles.	Sq. Miles.	Sq. Miles.	Per cent.
Central	1,598	94	118	1,810	2
Oudh	1,204	...	...	1,204	1
School	800*	...	14	814*	1
	3,602	94	132	3,828	4
	3,591	67	132	3,790	4
	+11	+27	...	+38	...

* Includes 78 square miles of *Leased* forests.

3. The large preponderance, as exhibited in the above table, of Reserves over forests of other classes is satisfactory; but the Reports under review take account only of those areas which are under the control of the Forest Department, and it is not possible to gain a clear idea of the general aspect of the provincial forest administration, and of its existing and prospective requirements and possibilities, without taking something more than a mere departmental point of view. The Government of India accordingly desire that the returns in future Reports should contain full information regarding all forest and pasture lands still at the disposal of the State.

4. Considerable attention has been paid to the final settlement of forest boundaries and their permanent demarcation, and the Government of India notice with satisfaction that the importance of securing an adjustment of any doubtful points which may still exist has been fully recognized by His Honour the Lieutenant-Governor; for it cannot be gainsaid that any uncertainties in respect of proprietary rights or the correctness of boundaries may seriously interfere with the compilation of Working-Plans and the execution of pre-considered works.

5. The surveys of the forests under the control of the Forest Department are further advanced in the North-Western Provinces and Oudh than in any other part of India, and the progress reported from time to time is, as a rule, connected with an increase of the reserved areas.

6. Exceptional progress has also, in previous years, been made in the compilation of Working-Plans, but in this direction a wide field of action still lies before the forest administration; for work of this kind is never final. When plans have been completed for all forests of the Province, the revision of those made previously will demand the attention of the forest staff. It has been specially noticed that a Working-Plan will soon be completed for the Kheri Reserve, which is probably one of the most important forest areas underlying the Himalayas, and which has recently, in consequence of the forward railway policy of the North-Western Provinces and Oudh, been brought into closer connection with the markets of more developed districts.

The remarks made in paragraph 7 of the Lieutenant-Governor's Resolution, whilst exposing the difficulties with which the Local Government has to deal in the introduction of a systematized working of the forests, may be accepted as a guarantee that His Honour not only recognizes the importance in regard to forest management of pre-considered and well ordered programmes, which join hands with the past on the one side and with the future on the other, but that he has also decided upon enforcing adherence to the provisions of Working-Plans unless and until a deviation has been proved to be necessary or desirable. Deviations from a Working-Plan, or even its entire revision, may be rendered unavoidable or expedient by a change in the conditions of supply or demand, or by reason of faults in the plan itself. The occurrence of fire or other accident which may necessitate a change of treatment may also have a like effect. But so long as a plan is in force its provisions should be respected. The remarks in paragraph 7 of the Resolution are fully approved by the Government of India.

7. His Excellency in Council has read with regret the complaints contained in paragraph 8 of the Resolution regarding the inefficiency of the provincial and subordinate services, and the difficulty experienced in recruiting these important branches of the forest administration. The Government of India are, however, convinced that the present difficulties are largely due to the unsystematic growth of the service, and trust that when it has once been organized on principles which guarantee an even and sufficient flow of promotion, the present unsatisfactory state of things will disappear.

8. The following table shows that the gross area successfully protected from fire was increased during the year by 131 square miles: —

Circle.	Area, in square miles.			Proportion of failures to area attempted	Cost		Proportion of area under fire-protection to total area of Reserves.
	Attempted	Failures	Protected		Per square mile protected	Per acre protected	
				Per cent.	R	Pies.	Per cent.
Central	873	22	851	3	25	8	52*
Oudh	773	44	729	6	18	5	64
School	630	1	629	0 16	8	2	79
Total in 1890-91	2,276	67	2,209	3	18	5	62
" 1889-90	2,202	124	2,078	5	18	5	60
Difference in 1890-91	+74	−57	+131	−2	...	..	+2

* Proportion to area of Reserved and Protected forests

A considerable proportion of the area fired is attributed to incendiarism, and the Government of India observe with approval that His Honour the Lieutenant-Governor has taken serious notice of such wanton destruction of valuable State property.

The refusal of the inhabitants of the Nadha village who, whilst in the enjoyment of forest privileges, refused to assist in extinguishing a fire, is, in the opinion of the Government of India, a proper case for the institution of a special enquiry to be held with a view of ascertaining whether the confiscation of at least some of the privileges of the offenders is desirable. The Nadha case has been rendered even more serious by the maltreatment of a forest official and would seem to demand an exemplary punishment. As a principle of policy is involved, His Excellency in Council desires to be informed of the results of the local inquiry if instituted.

No improvement can take place in the condition of forests so long as their firing is permitted, and the Government of India entirely approve of the policy under which the Lieutenant-Governor contemplates a gradual extension of protective measures.

The Nipal boundary line, which is in many places overgrown with high grass, is a source of anxiety and danger in regard to fire-protection, and the Darbar again failed to clear away the inflammable material on their side of the boundary line.

9. His Excellency the Governor General in Council has observed with pleasure that the Local Government reports favourably on the good understanding which exists between Revenue and Forest Officers. The duties and responsibilities of Divisional Commissioners in regard to Forest Administration will form the subject of a separate communication.

10. Wherever grazing cannot be excluded, it must be controlled in such a way as to afford rest of sufficient duration to each portion of the forest in its turn. These periods of rest should be long enough to permit the establishment of young reproduction and its growth out of reach of harm.

It is observed that in the Central Circle 52·14 per cent. of the forest area under the control of the Forest Department has been closed to grazing, 45·18 per cent. in the Oudh Circle, and 29·13 per cent. in the School Circle; but it is impossible to gauge from these figures alone whether, or how far, the interests of the forests have been safeguarded. In the event of the grazing rules for any part of the Province being revised, the power of periodical closure for sylvicultural reasons should be fully reserved and clearly defined.

11. The Reports treat in a satisfactory manner of the reproduction of the forests, but contain nothing of special interest, either from a sylvicultural or general point of view.

The steady increase in the culture of the sweet-chestnut and other fruit trees in the valleys of the Himalayas is a question to which the Government of India attach considerable importance.

12. The remarks in the Reports and the Resolution on climber-cutting and other forest operations, undertaken with the primary view of improving the growing stock and its chances of future development, have been read with considerable interest and are accepted as one of the numerous signs which indicate true progress in forest management.

13. His Honour's remarks on Communications and Buildings deal with the question so thoroughly that none are needed by the Government of India.

14. The following table shows that the outturn in timber fell short of that of the previous year by nearly one lakh of cubic feet:—

Agency by which removed.	Material removed.				Average outturn per square mile.		
	Timber.	Fuel.	Bamboos.	Minor produce.	Timber and Fuel.	Bamboos.	Minor produce.
	c. ft.	c. ft.	No.	R	c. ft.	No.	R a. p.
Reserved Forests.							
Government	1,027,800	1,797,999	226,220	20,011	784	63	6 0 0
Purchasers	1,663,105	2,394,251	16,518,081	2,40,490	1,126	4,586	67 0 0
Free-grants	1,062 592	1,731,655	5,480	21,693	776	1	6 0 0
Right-holders	183,778	172,830	144,060	4,287	99	40	1 0 0
Total	3,937,275	6,096,735	*16,894,741	2,86,481	2,785	4,690	80 0 0
Protected Forests.							
Government	620	64,456	97,220	21	692	1,034	0 4 0
Purchasers	81,131	229,580	42,600	2,600	3,305	453	27 11 0
Free-grants	6,724	100	...	...	73	...	...
Right-holders	108,130	...	...	...	1,150	...	...
Total	196,605	294,136	†139,820	2,621	5,220	1,487	27 15 0
Unclassed Forests.							
Government	32,317	156	23,701	127	246	179	1 0 0
Purchasers	30,111	56,217	1,162,880	4,052	654	8,810	31 0 0
Free grants	..	...	...	...	...	...	...
Right-holders	...	...	...	...	...	...	...
Total	62,428	56,373	‡1,186,581	4,179	900	8,989	32 0 0
Grand Total, 1890 91	4,196,308	6 447,244	18,221,142	2,93,281	2,780	4,760	77 0 0
" " 1889-90	4,291,848	6,412,028	17,794,093	2,75,970	2,824	4,698	73 0 0
Difference in 1890-91	—95,540	+35,216	+427,049	+17,311	—44	+62	+4 0 0

	Value. R
	*1,14,492
	†1,024
	‡6,185
Total	1,21,701

The outturn and financial results of the year have been so fully discussed in the Lieutenant-Governor's Resolution that no further remarks thereon are required.

15. The following table shows that the Surplus of the year exceeds the average for the last five years by R1,33,597:—

Circles.	Receipts.	Charges.	Surplus.	Proportion of Surplus to gross Receipts.
	R	R	R	Per cent.
entral	5,80,384	2,49,568	3,30,816	57
Oudh	7,08,967	4,02,716	3,06,251	43
School	3,48,528	2,66,613	81,915	24
Total in 1890-91	16,37,879	9,18,897	7,18,982	44
" 1889-90	17,14,159	9,63,151	7,51,008	44
Difference in 1890-91	—76,280	—44,254	—32,026	...
Average for the five years ending 1889-90	14,91,893	9,06,508	5,85,385	39

16. His Excellency the Governor General in Council acknowledges that constant and steady progress is being made in the Forest Administration of the North-Western Provinces and Oudh, and once more thanks His Honour the Lieutenant-Governor for the interest he has taken in this branch of the administration and for his exhaustive review of the Annual Reports of the year.

Government of India Central Printing Office,—1311 R. & A.—14-3-92—90.—G. B.